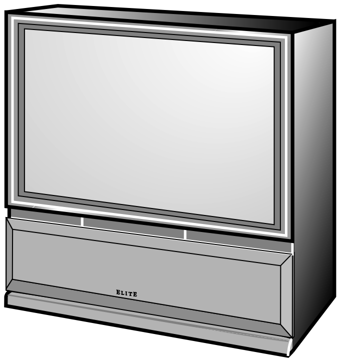
Pioneer

Service Manual



ORDER NO.
ARP3051

PROJECTION MONITOR RECEIVER

PRO-610HD
PRO-510HD
SD-582HD5
SD-532HD5

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model				Power Requirement	Remarks
	PRO-610HD	PRO-510HD	SD-582HD5	SD-532HD5		
KUXC/CA	○	○	○	○	AC120V	
KBXC	—	—	—	○	AC120V	

● This service manual should be used together with the following manual(s):

Model No.	Order No.	Remarks
PRO-610HD	ARP3047	

CONTENTS

6. ADJUSTMENT 195
7. GENERAL INFORMATION 219
  7.1 DIAGNOSIS 219
    7.1.1 DIAGNOSIS METHOD 219
    7.1.2 DISASSEMBLY 224
    7.1.3 WIRING DIAGRAM 226
  7.2 IC 228
  7.3 EXPLANATION.. 254
8. PANEL FACILITIES AND SPECIFICATIONS 266

PIONEER CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER ELECTRONIC (EUROPE) N.V. Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

© PIONEER CORPORATION 1999

O–ZZR NOV. 1999 Printed in Japan

6. ADJUSTMENT

6.1 INTRODUCTION

• IMPORTANT

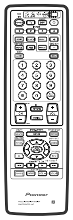
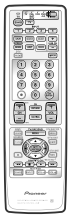
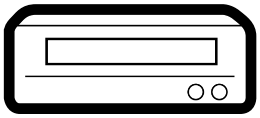
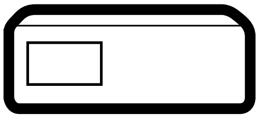
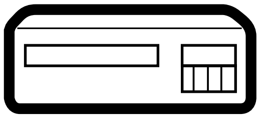
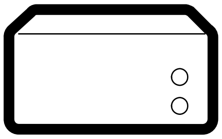
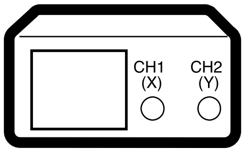
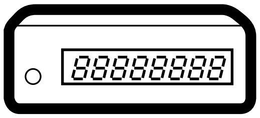
When replacement of the following assemblies are required during repairs, be sure to replace the EEPROMs with the mounted ones in order to retain the adjustment data of the unit and to facilitate adjustment after the replacement of the assemblies.

Name of Assy	EEPROM	Main Contents of Memory
SIGNAL Assy	IC2454 [24LC32(I)P]	Adjustment data, such as W/B and color data, in FACTORY mode User data set on the MENU
DIGITAL CONV. Assy	IC1410 [24LC128P]	Convergence adjustment data
	IC1656 [24LC08B(I)P]	Convergence offset data

Notes:

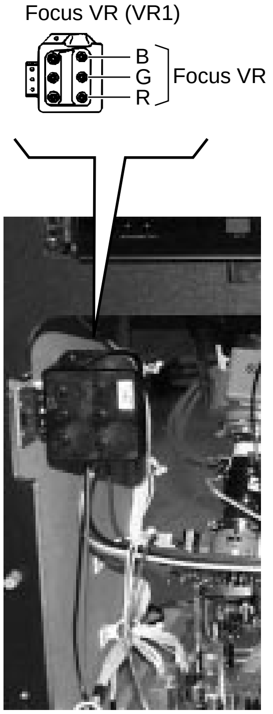
- Even if the EEPROMs are replaced, adjustment may be necessary, depending on the part or assembly to be replaced. For details, see page 197.
- Even if the EEPROMs are replaced, if the EEPROMs are damaged or if their data have been changed from the adjustment data, the status before the failure will not be restored. Check the status of the unit after replacement of the EEPROMs, and readjust if necessary.

6.2 JIGS AND MEASURING INSTRUMENTS

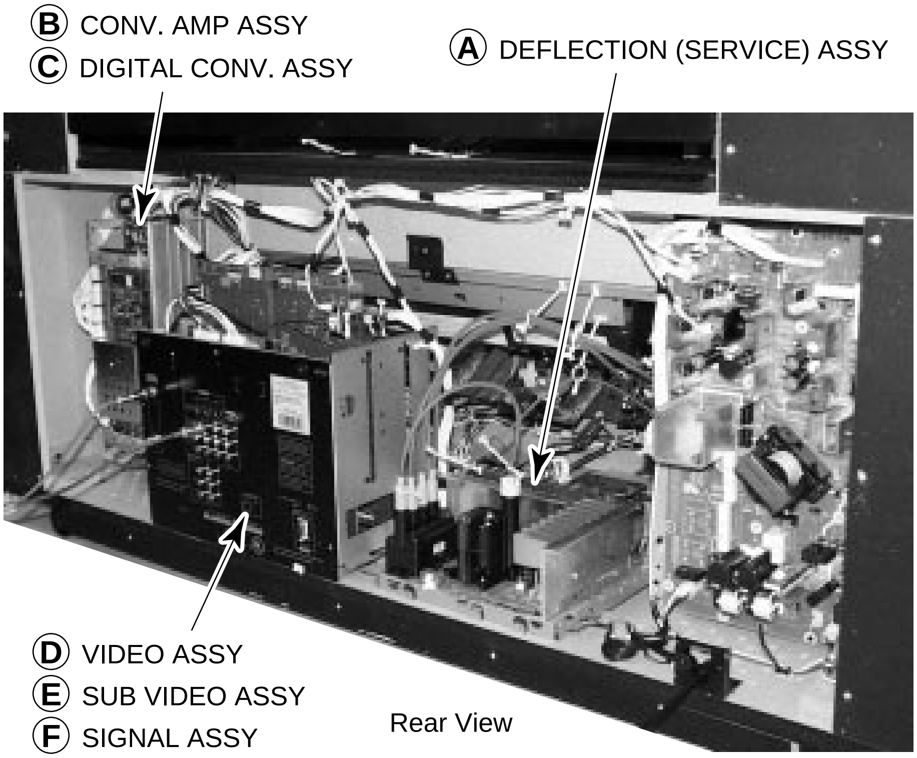
 Remote control unit AXD1448 (CU-SD110) (For PRO-610HD, PRO-510HD)	 Remote control unit AXD1449 (CU-SD111) (For SD-582HD5, SD-532HD5)	⊖ Screwdriver	⊖ Adjustment screwdriver
 Color bar generator	 D. DC Voltmeter	 LD Player	 Monoscope
 Dual-trace oscilloscope	 Frequency counter	For HD Signal generator	

6.3 ADJUSTMENT LOCATION AND ITEMS

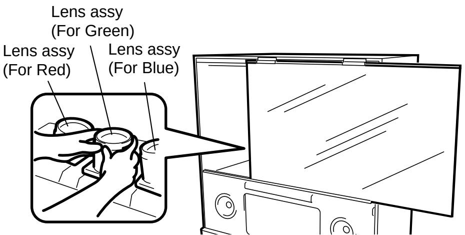
■ Assembly Adjustment Location

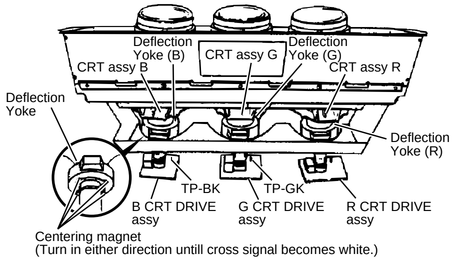

Focus VR (VR1)
B
G
R
Focus VR

Front View


Ⓑ CONV. AMP ASSY
Ⓒ DIGITAL CONV. ASSY
Ⓐ DEFLECTION (SERVICE) ASSY
Ⓓ VIDEO ASSY
Ⓔ SUB VIDEO ASSY
Ⓕ SIGNAL ASSY

Rear View


Lens assy (For Green)
Lens assy (For Red)
Lens assy (For Blue)


Deflection Yoke (B)
CRT assy G
Deflection Yoke (G)
CRT assy B
CRT assy R
Deflection Yoke
Deflection Yoke (R)
TP-BK
TP-GK
B CRT DRIVE assy
G CRT DRIVE assy
R CRT DRIVE assy
Centering magnet
(Turn in either direction untill cross signal becomes white.)

■ Adjustment Items

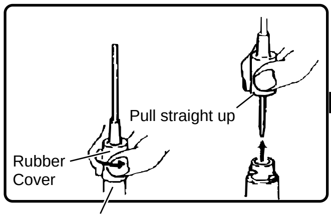
- ❶ Brightness Adjustment
- ❷ Deflection Yoke Adjustment
- ❸ Focus Adjustment
- ❹ Test-cross Position Check
- ❺ Screen Size Adjustment
- ❻ Convergence Adjustment
- ❼ White Balance Adjustment
- ❽ Panel Adjustment
- ❾ Panel Adjustment for DTV

MEASURING METHOD

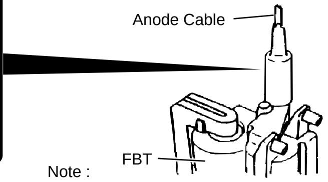
Disconnect the FBT anode cable as shown below.
Measure at the point where the cable enters the FBT.

Caution : Take extra precaution when measuring the voltage. High voltage are also present in surrounding circuit boards. (CRT assy, POWER SUPPLY assy)

SERVICEMAN WARNING
Before removing the anode cable, turn off the power, unplug the AC plug and let the unit discharge for more than 1 minut.


Pull straight up
Rubber Cover

Holding the rubber cover firmly, turn counterclockwise and check that the lock has been disengaged.


Anode Cable
FBT

Note :
When reconnecting the cable, proceed in the reverse order. After reconnecting, tug on the cable to check that it is secure.

■ Assembly Adjustment Location Guide

If POWER SUPPLY ASSY	is repaired or replaced	No adjustment is required
If DEFLECTION SERVICE ASSY	is repaired or replaced	❶ Brightness Adjustment (∗2) ❸ Focus Adjustment (VR1: FOCUS VR) (∗2) ❺ Screen Size Adjustment (∗2) ❻ Convergence Adjustment (∗2) ❼ White Balance Adjustment (∗2)
If CONV. AMP ASSY	is repaired or replaced	❺ Screen Size Adjustment (∗2) ❻ Convergence Adjustment (∗2)
If R, G or B CRT DRIVE ASSY	is repaired or replaced	❶ Brightness Adjustment (∗1) ❼ White Balance Adjustment (Composite STD :∗1, Others :∗2)
If DIGITAL CONV. ASSY	is repaired or replaced	❸ Focus Adjustment (∗2) ❹ Test-cross Position Check (∗2) ❺ Screen Size Adjustment (∗2) ❻ Convergence Adjustment (∗2)
If VIDEO ASSY	is repaired or replaced	❶ Brightness Adjustment (∗2) ❼ White Balance Adjustment (Composite STD : ∗1, Others :∗2) ❽ Panel Adjustment (∗1) ❾ Panel Adjustment for DTV (∗1)
If SIGNAL ASSY	is repaired or replaced	❼ White Balance Adjustment (∗2)
If SUB VIDEO ASSY	is repaired or replaced	❹ Test-cross Position Check (∗2) ❼ White Balance Adjustment (∗2)
If AV I/O ASSY	is repaired or replaced	No adjustment is required
If CRT ASSY (R, G or B)	is repaired or replaced	❶ Brightness Adjustment (∗1) ❷ Deflection Yoke Adjustment (∗1) ❸ Focus Adjustment (Lens : ∗2, VR1 Focus VR :∗1) ❻ Convergence Adjustment (∗2) ❼ White Balance Adjustment (Composite STD : ∗1, Others :∗2)
If LENS ASSY (R, G or B)	is repaired or replaced	❸ Focus Adjustment (Lens : ∗1, VR1 Focus VR :∗2) ❻ Convergence Adjustment (∗2)
If MIRROR and SCREEN	is repaired or replaced	❻ Convergence Adjustment (∗2)
If OTHER ASSY	is repaired or replaced	No adjustment is required

Note :
*1: Readjustment necessary
*2: Turn on the power and confirm the screen. When adjustment deviates, it is readjusted if necessary.

- When the EEPROMs are replaced, check the status of the unit.
- If any IC of the EEPROM is damaged, readjustment of all the items is necessary.

- The necessary adjustment items differ, depending on the assembly or optical part replaced. Check and readjust the adjustment items corresponding to the replaced assembly or part, following adjustment procedures 1 to 9.
  Example: When the DIGITAL CONV. Assy is replaced, perform the following:
  3. Focus check/adjustment → 4. Test-cross position check/adjustment → 5. Screen size check/adjustment
  → 6. Convergence check/adjustment

6.4 FACTORY ADJ MODE

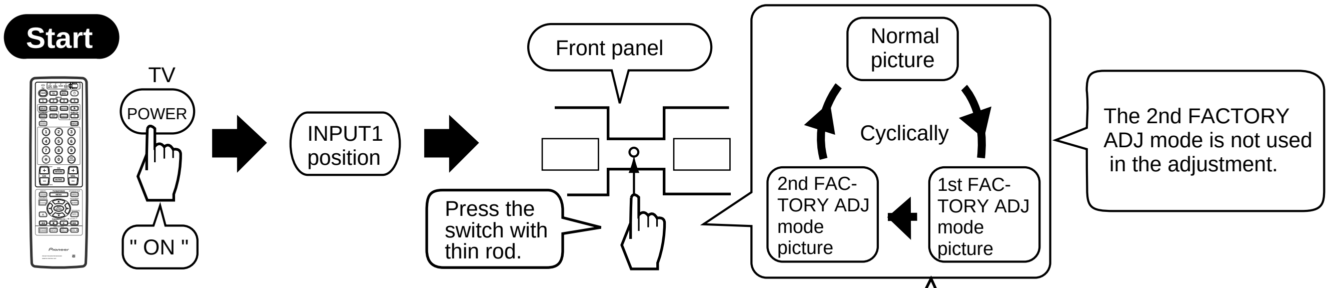
■ Factory Adjustment Mode

Start .... Start adjusting

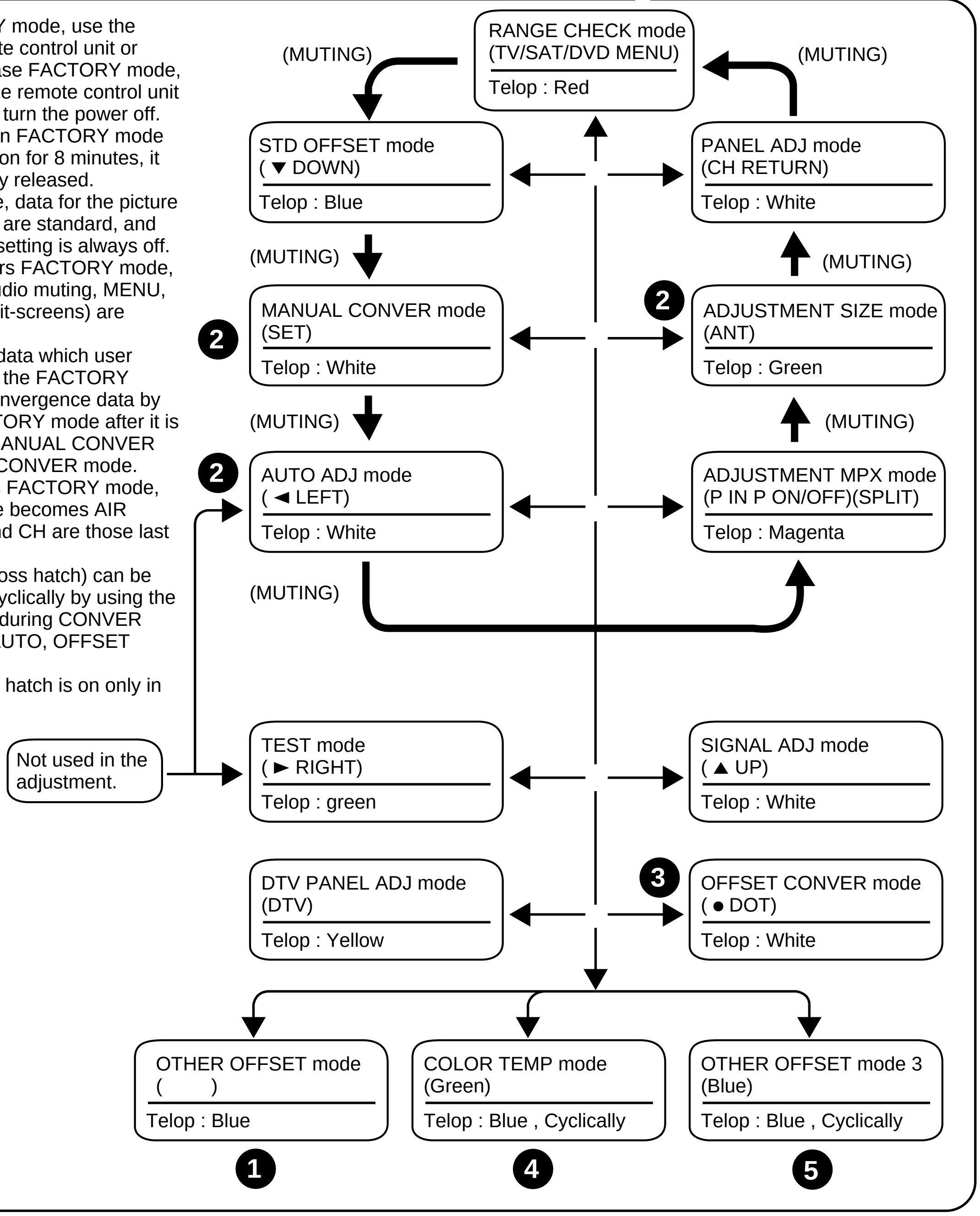
1st FAC ...... Select 1st FACTORY ADJ mode, then adjust.

Select 1st FACTORY ADJ Mode

Selecting the mode for adjustment operations.


Start
TV
POWER
" ON "
INPUT1 position
Front panel
Press the switch with thin rod.
Normal picture
Cyclically
2nd FACTORY ADJ mode picture
1st FACTORY ADJ mode picture
The 2nd FACTORY ADJ mode is not used in the adjustment.

- To enter FACTORY mode, use the key(s) on the remote control unit or main unit. To release FACTORY mode, use the key(s) of the remote control unit or the main unit, or turn the power off. If the unit remains in FACTORY mode without any operation for 8 minutes, it will be automatically released.
- In FACTORY mode, data for the picture and audio qualities are standard, and the FLESH TONE setting is always off.
- When the unit enters FACTORY mode, settings such as audio muting, MENU, and SPLIT (two split-screens) are released.
- The Convergence data which user adjusted are within the FACTORY mode. Clear the convergence data by releasing the FACTORY mode after it is further within the MANUAL CONVER mode or OFFSET CONVER mode.
- When the unit exits FACTORY mode, the TV/CATV mode becomes AIR (settings of ANT and CH are those last stored in memory).
- CONVER. OSD (cross hatch) can be turned on and off cyclically by using the YELLOW key only during CONVER mode (MANUAL, AUTO, OFFSET adjustments). (Default: The cross hatch is on only in CONVER. mode.)


RANGE CHECK mode (TV/SAT/DVD MENU)
Telop : Red
(MUTING)
(MUTING)
STD OFFSET mode (▼ DOWN)
Telop : Blue
PANEL ADJ mode (CH RETURN)
Telop : White
(MUTING)
(MUTING)
2
MANUAL CONVER mode (SET)
Telop : White
2
ADJUSTMENT SIZE mode (ANT)
Telop : Green
(MUTING)
(MUTING)
2
AUTO ADJ mode (◄ LEFT)
Telop : White
ADJUSTMENT MPX mode (P IN P ON/OFF)(SPLIT)
Telop : Magenta
(MUTING)
Not used in the adjustment.
TEST mode (► RIGHT)
Telop : green
SIGNAL ADJ mode (▲ UP)
Telop : White
DTV PANEL ADJ mode (DTV)
Telop : Yellow
3
OFFSET CONVER mode (● DOT)
Telop : White
OTHER OFFSET mode ( )
Telop : Blue
1
COLOR TEMP mode (Green)
Telop : Blue , Cyclically
4
OTHER OFFSET mode 3 (Blue)
Telop : Blue , Cyclically
5

❶ OTHER OFFSET mode

To enter the OFFSET mode of each picture quality, use the following keys and codes of the remote control unit:

		Key(s) on the Remote Control Unit
A	STD OFFSET MODE	DOWN
C	COMP (15 kHz) OFFSET MODE	P in P CH-, SUB CH-
D	COMP (31 kHz, 33 kHz) OFFSET MODE	P in P CH+, SUB CH+
B	TV OFFSET MODE	RED
V	COLOR TEMP B&W for STD	DTV MENU
L	COLOR TEMP FILM for STD & GAME	INFO
T	RGB OFFSET MODE	CH ENTER

❷ The screen size modes change cyclically with each press of the SCREEN key as follows:

→ ① FULL → ② ZOOM → ③ CINEMA → ④ NATURAL → ⑤ FULL (HD)

Note :The initial mode is always FULL.

❸ The OFFSET CONVER. modes change cyclically with each press of the DOT key as follows:

→ ① OFFSET CONVER. MODE 1 → ② OFFSET CONVER. MODE 2 → ③ OFFSET CONVER. MODE 3

Note :The initial mode is always OFFSET CONVER. MODE 1.

❹ The offset data of the picture quality in COLOR TEMP mode change cyclically with each press of the GREEN key as follows:

①	J	COLOR TEMP	NEWS
②	K	COLOR TEMP	LIVE
③	M	COLOR TEMP	FILM for MOVIE
④	X	COLOR TEMP	B&W for MOVIE
⑤	β	COLOR TEMP	NEWS for R, G, B
⑥	γ	COLOR TEMP	LIVE for R, G, B
⑦	Y	COLOR TEMP	FILM for R, G, B
⑧	Z	COLOR TEMP	B&W for R, G, B

Note :The initial mode is always COLOR TEMP NEWS when the GREEN key is pressed.

❺ The offset data of picture quality change cyclically with each press of the BLUE key as follows:

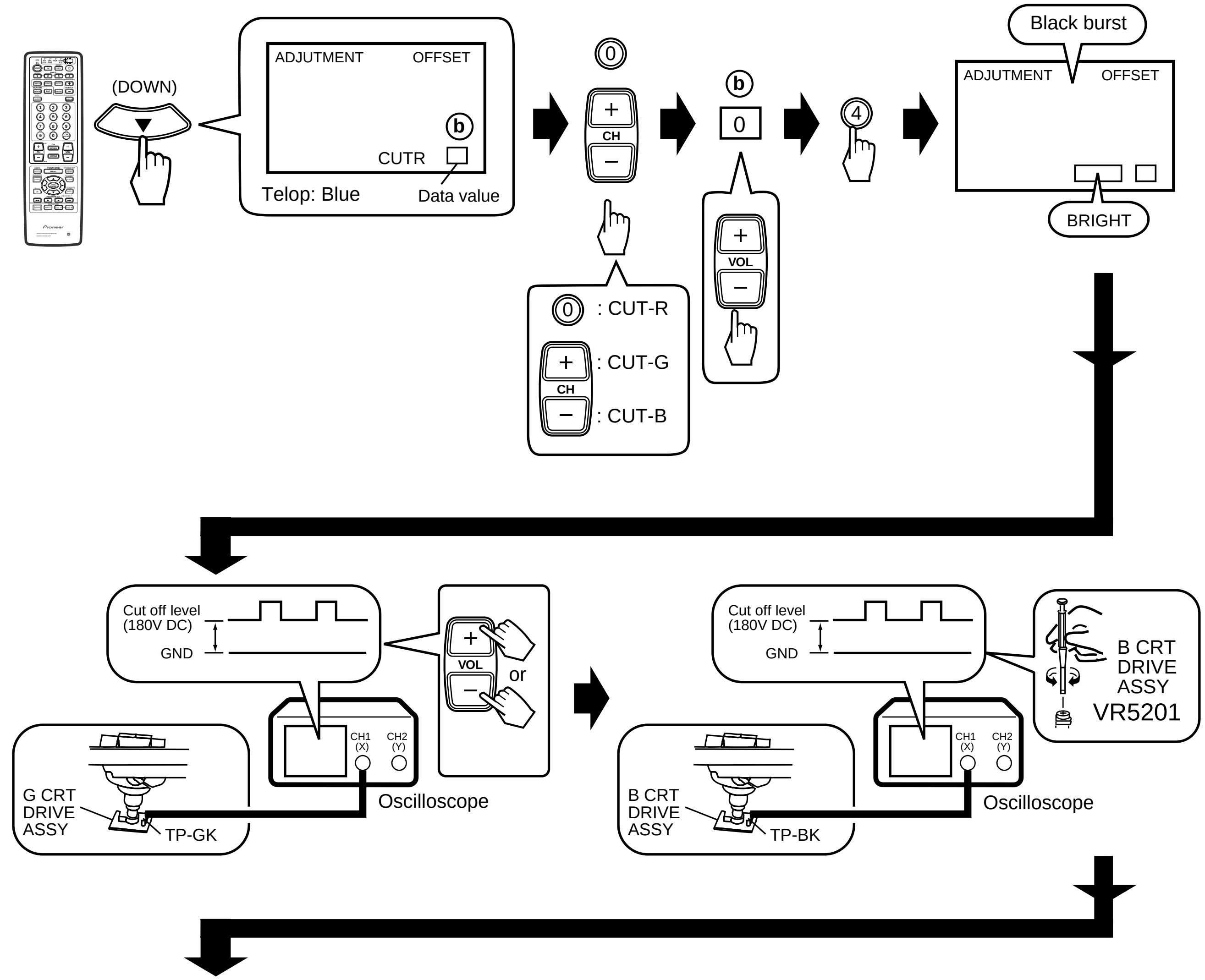
→ ① E MOVIE OFFSET MODE → ② F GAME OFFSET MODE

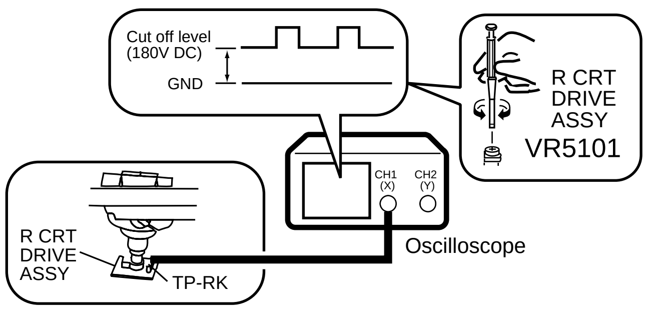
Note :The initial mode is always (1) when the BLUE key is pressed.

6.5 ADJUSTMENT

1 Brightness Adjustment

Start **1st FAC** Input signal : Black Burst (INPUT 1)


(DOWN)
ADJUTMENT
OFFSET
b
CUTR
Telop: Blue
Data value
0
+
CH
−
0 : CUT-R
+ : CUT-G
CH
− : CUT-B
b
0
+
VOL
−
4
Black burst
ADJUTMENT
OFFSET
BRIGHT
Cut off level
(180V DC)
GND
CH1 (X)
CH2 (Y)
Oscilloscope
G CRT
DRIVE
ASSY
TP-GK
+
VOL
−
or
Cut off level
(180V DC)
GND
CH1 (X)
CH2 (Y)
Oscilloscope
B CRT
DRIVE
ASSY
TP-BK
B CRT
DRIVE
ASSY
VR5201


Cut off level
(180V DC)
GND
CH1 (X)
CH2 (Y)
Oscilloscope
R CRT
DRIVE
ASSY
TP-RK
R CRT
DRIVE
ASSY
VR5101

When the DEFLECTION SERVICE Assy or VIDEO Assy is replaced, check the following to confirm if the above adjustment is necessary:

(1) Make a note of the data of CUT R, CUT G, CUT B, and BRIGHT. (1st FAC) (▼ DOWN)

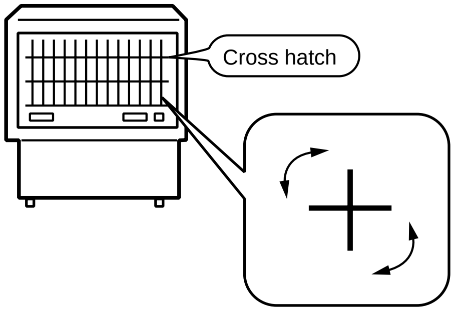
(2) Input "0" as parameters for (1) and check TP-RK, TP-GK and TP-BK of the CRT DRIVE assembly. If the levels are within 180 V ±5 V, the adjustment is not necessary.
Input the noted data.
If the levels are not within the above level, proceed with the above adjustment.

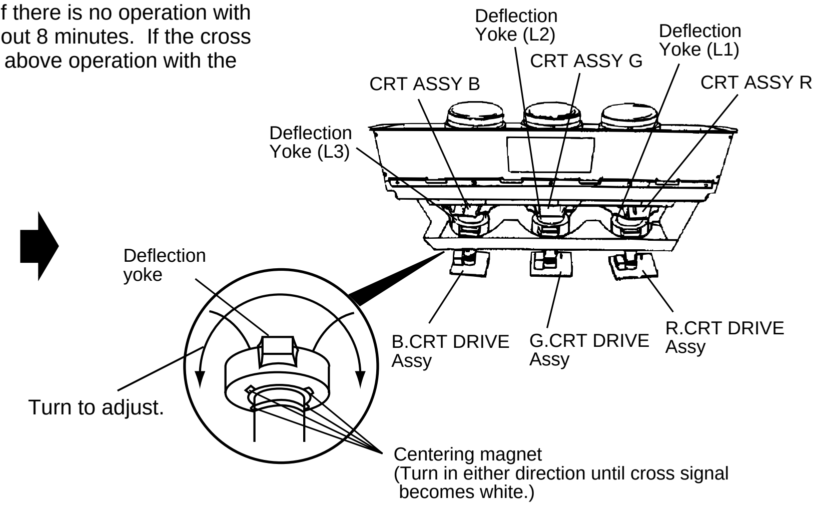
2 Deflection Yoke Adjustment

2 -1 Deflection Yoke Lean Adjustment

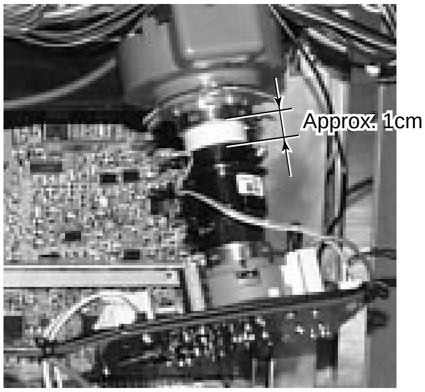
Start

- Input a stable signal (e.g. from an LD player or SG) to the INPUT 1 connector.
- MENU → SETUP → Enter the MULTI-POINT (FULL) in the CONVERGENCE.
- The cross hatch disappears if there is no operation with the remote control unit for about 8 minutes. If the cross hatch disappears, repeat the above operation with the remote control unit.


Cross hatch

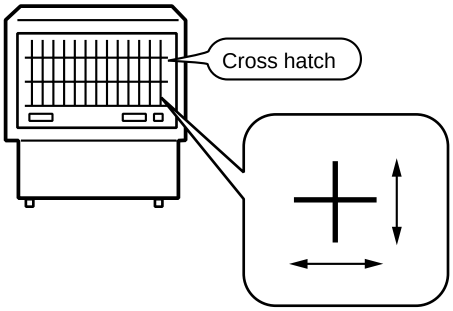

Deflection Yoke (L2)
Deflection Yoke (L1)
CRT ASSY G
CRT ASSY B
CRT ASSY R
Deflection Yoke (L3)
Deflection yoke
B.CRT DRIVE Assy
G.CRT DRIVE Assy
R.CRT DRIVE Assy
Turn to adjust.
Centering magnet
(Turn in either direction until cross signal becomes white.)

- Turn the deflection yoke of the replaced CRT so that the cross hatch of the color corresponding to the replaced CRT converges with that of the CRTs not replaced.
- When a CRT is replaced, check the position of the VM (Velocity Modulation) yoke.

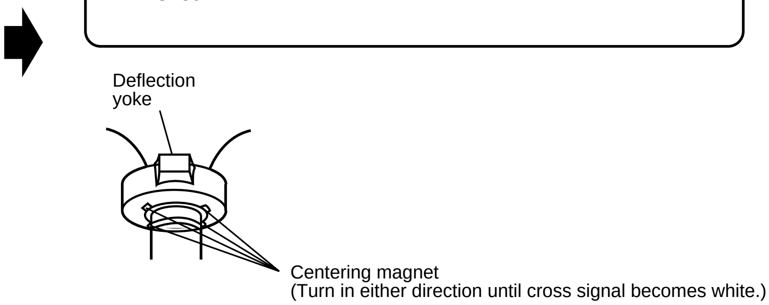


2 -2 Screen Center Adjustment

Start


Cross hatch

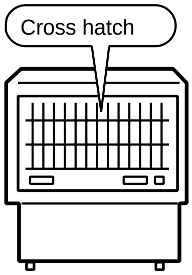
- Move the centering magnet of the deflection yoke for the replaced color so that the horizontal and vertical lines at the center of the screen align with the lines for a color not replaced.
- Secure the centering magnet from moving after adjustment is finished.

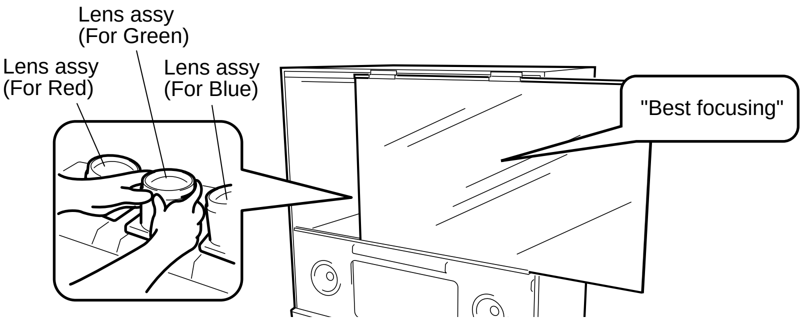

Deflection yoke
Centering magnet
(Turn in either direction until cross signal becomes white.)

❸ Focus Adjustment

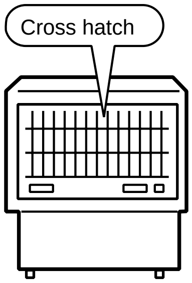
❸ -1 Focus Adjustment of Lens Assy

Start

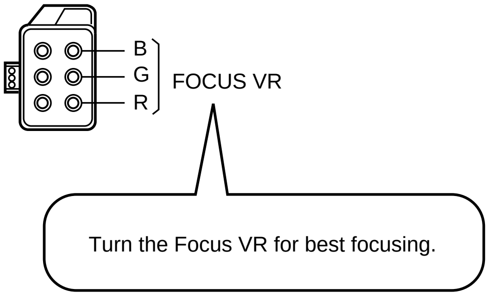

Cross hatch


Lens assy (For Green)
Lens assy (For Red)
Lens assy (For Blue)
"Best focusing"

❸ -2 Focus VR Adjustment


Cross hatch

Focus VR (VR1)

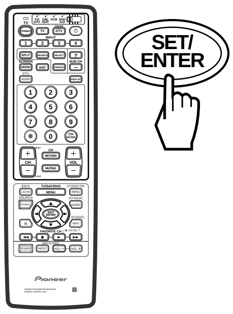

B
G
R
FOCUS VR
Turn the Focus VR for best focusing.

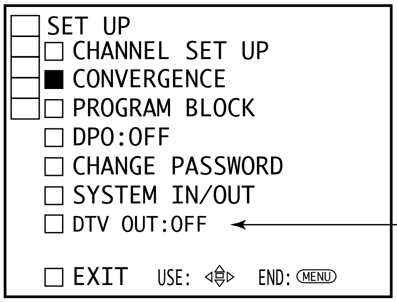
④ Test-cross Position Check

- Check the test-cross position. If it is located within ± 20 mm from the center of the screen, no adjustment is required. If it is not, adjust the position as follows:
- Input a stable NTSC (480i) signal (e.g. from an LD player) and adjust the position.

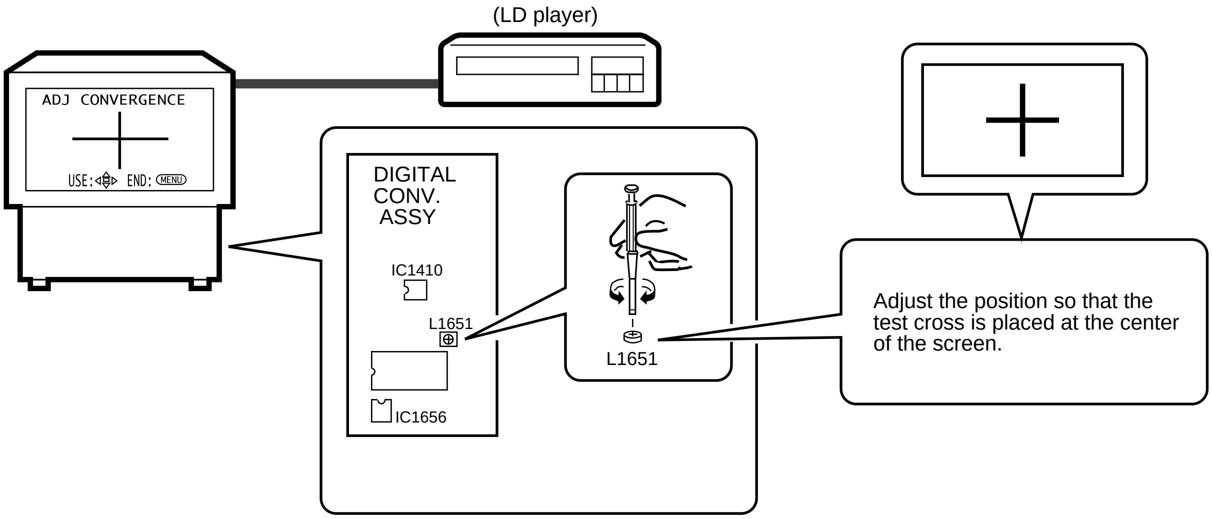
Start

MENU → SETUP → CONVERGENCE → FULL


SET/
ENTER
Pioneer


SET UP
☐ CHANNEL SET UP
■ CONVERGENCE
☐ PROGRAM BLOCK
☐ DPO:OFF
☐ CHANGE PASSWORD
☐ SYSTEM IN/OUT
☐ DTV OUT:OFF
☐ EXIT USE: END: MENU

Notes:
- The item of DTV OUT might not be displayed when the DTV BIB (built-in DTV tuner) is not connected.


(LD player)
ADJ CONVERGENCE
USE: END: MENU
DIGITAL
CONV.
ASSY
IC1410
L1651
IC1656
L1651

Adjust the position so that the test cross is placed at the center of the screen.

5 Screen Size Adjustment

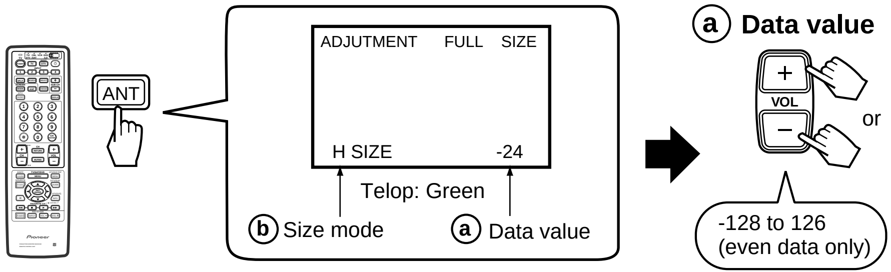
Check if both vertical and horizontal sizes are within 91% ±2%. If they are not, perform the size adjustment as follows:

5 -1 Size Mode

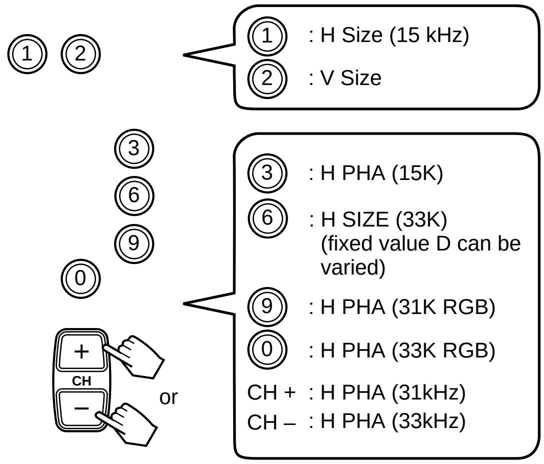
Start **1st FAC**

Note :
Screen mode : FULL

- Mode for roughly adjusting the horizontal and vertical sizes of the main deflection.
- In this mode, the color is green only, screen size is FULL and the contrast is +10.
- The above settings are cleared when this mode is exited.


ANT
ADJUTMENT FULL SIZE
H SIZE -24
Telop: Green
ⓑ Size mode
ⓐ Data value
ⓐ Data value
+
VOL
–
or
-128 to 126
(even data only)

ⓑ Size mode


① ②
③ ⑥ ⑨ ⓪
+
CH
–
or

① : H Size (15 kHz)
② : V Size

③ : H PHA (15K)
⑥ : H SIZE (33K) (fixed value D can be varied)
⑨ : H PHA (31K RGB)
⓪ : H PHA (33K RGB)
CH + : H PHA (31kHz)
CH – : H PHA (33kHz)

Note :
- The adjustment is unnecessory for D so that is set in factory shipment by the most suitable value.
  However, please adjust it when a screen is missed when displayed the HD source on the screen.
- For H PHA, refer to the section "• Reference."

Table on H SIZE and V SIZE data

Picture Quality Mode	H SIZE	V SIZE
NATURAL WIDE	A	B
CINEMA WIDE	A	B
ZOOM	A	B
FULL	A	B
FULL for HD	A+D	B

A, B	: Adjustment values
D	: Fixed values
A+D	: Addition of A and D

- Perform the H SIZE and V SIZE adjustments only in FULL mode (NTSC MONOSCOPE signal input).
- Release the FACTORY mode, then change the screen mode and confirm that the picture is not missing.

The factory-preset values are as follows:

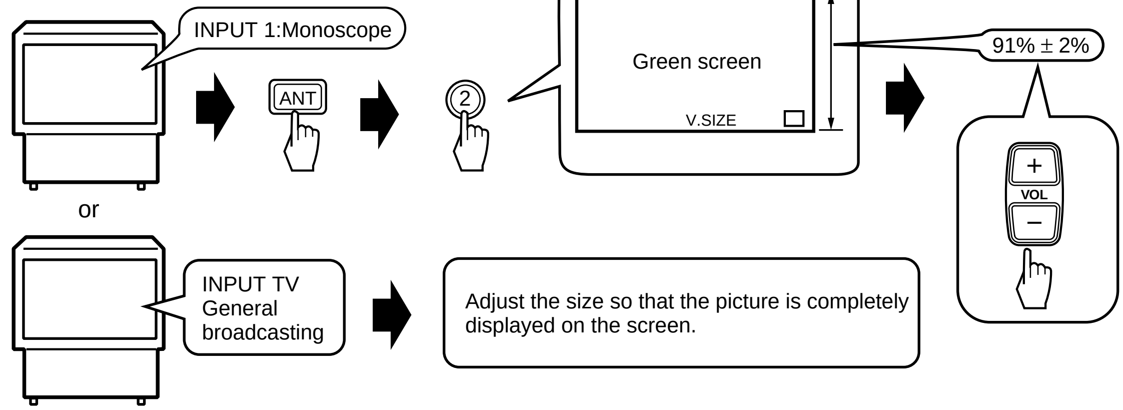
Key No.	PRO-610HD PRO-510HD	SD-582HD5 SD-532HD5
1 : H SIZE (15K)	Approx. 16 ± 30	Approx. 16 ± 30
2 : V SIZE	Approx. -50 ± 30	Approx. -50 ± 30
6 : H SIZE (33K)	Approx. 70 ± 30	Approx. 70 ± 30

Note: Varies depending on the factory-preset value.

5 -2 Vertical Size Adjustment

Start **1st FAC**

Note :
Screen mode : FULL


INPUT 1:Monoscope
ANT
2
Green screen
V.SIZE
91% ± 2%
+
VOL
–
or
INPUT TV
General
broadcasting

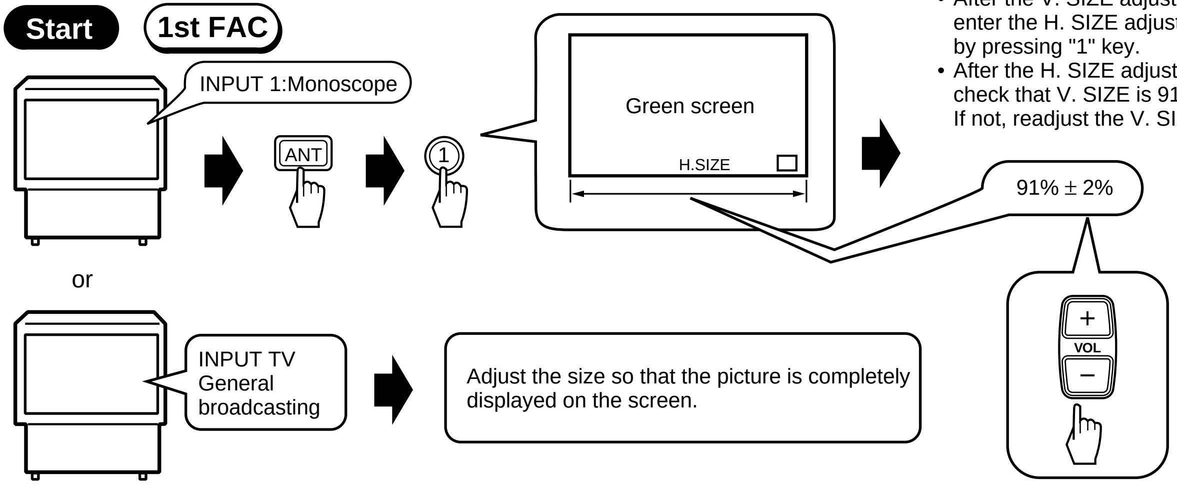
Adjust the size so that the picture is completely displayed on the screen.

5 -3 Horizontal Size Adjustment

Start **1st FAC**

Note :
Screen mode : FULL

Note :
- After the V. SIZE adjustment, enter the H. SIZE adjustment by pressing "1" key.
- After the H. SIZE adjustment, check that V. SIZE is 91± 2%. If not, readjust the V. SIZE.

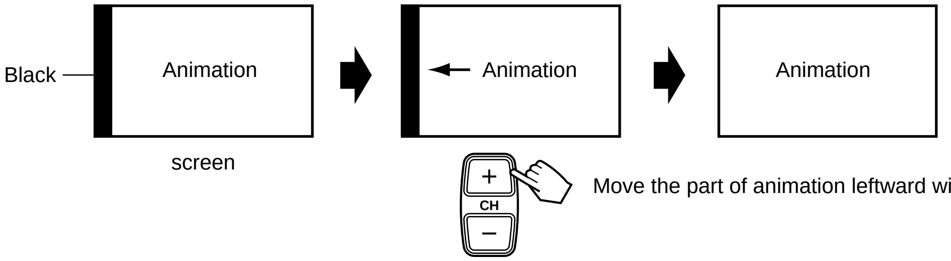


Adjust the size so that the picture is completely displayed on the screen.

- **Reference**

The H PHASE adjustment is required if the left or right part of the screen becomes black, as illustrated below, depending on the format of the input signal (Ex. component 31.5 kHz, RGB 33K etc.).

Ex. Component 31K



Move the part of animation leftward with CH+.

- **About H. PHASE**

In principle, adjustment of the data for the H. PHASE is not required.
Check whether the H. PHASE data are the factory-preset values, as indicated below:

Key No.	PRO-610HD PRO-510HD	SD-582HD5 SD-532HD5
3 : H PHA (15K)	80	80
CH+ : H PHA (31K)	36	40
CH- : H PHA (33K)	-14	-8
9 : H PHA (31K RGB)	26	30
0 : H PHA (33K RGB)	-26	-20

15K : CONPOSITE, S COMPONENT (480i)
31K : COMPONENT (480P)
33K : COMPONENT (1080i)

The screen moves to the right or the left if the above data are in variance. (See the above figures.)

Note :
H PHASE is set in factory shipment by the most suitable value. But, there is the case that screen is missed as an upper figure occurs by the signal format of other apparatus to be connected to.
A screen can be improved as the following by the readjustment. However, attention is necessory because in convenience may occur when connected to another apparatus.

❻ CONVERGENCE ADJUSTMENT

1. Procedures

1. When replacinf the DIGITAL CONV. Assy, replace the EEPROM of new DIGITAL CONV. Assy with the EEPROM of old DIGITAL CONV. Assy.
2. Check the initial data for the convergence adjustment.
3. Perform the coarse adjustment for the green to roughly correct distortion of the green.
4. Fine-adjust the green to eliminate any distortion. The green becomes the standard for the red and the blue.
   If necessary, repeat steps 3 and 4. Green adjustment is completed.
5. Perform the coarse adjustment for the red by roughly converging the red with the green.
6. Fine-adjust the red until the red is completely converging with the green.
   If necessary, repeat steps 5 and 6. Red adjustment is completed.
7. Perform the coarse adjustment for the blue by roughly converging the blue with the green.
8. Fine-adjust the blue until the blue is completely converging with the green.
   If necessary, repeat steps 7 and 8. Blue adjustment is completed.
9. Display the green, red, and blue colors at the same time to check the convergence. Readjust the convergence if necessary.

2. Prior to Adjustment

There are five screen modes, and convergence adjustment is required for each mode. For adjustment, input the following video signal:

Table 1 Input signal

Screen mode	Input signal
1. FULL (FULL, 4:3 NORMAL) 2. ZOOM (ZOOM) 3 CINEMA (CINEMA WIDE) 4. NATURAL (NATURAL WIDE)	NTSC (480i) signal
5. FULL for HD (HD/DTV)	HD/DTV (1080i) signal

NTSC : Stable signal source, such as an SG or an LD/DVD player
HD : Stable signal source, such as an HD SG or a DTV tuner (SH-D09, etc.) Only PRO-610HD5/510HD5 can use the SH-D09.

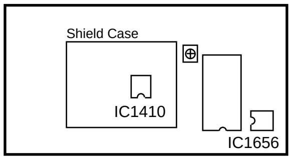
When CRTs are replaced or when the deflection yoke is moved, perform the deflection yoke adjustment, horizontal and vertical size adjustments, and centering magnet adjustments before the convergence adjustment. (See Pages 201, 204 and 205)

3. Convergence Adjustment

3.1 Replacement of the EEPROMs inside the DIGITAL CONV. Assy

IC1410 24LC128P
IC1656 24LC08B (I) P

DIGITAL CONV. ASSY



The data stored in the EEPROMs are as follows:
IC1410
OFFSET CONVER. MODE 1 (DFH, DFV)
OFFSET CONVER. MODE 3
Factory-preset values for convergence
User-adjusted values for convergence (CENTER, MULTI-POINT)

IC1656
OFFSET CONVER. MODE 1 (HDP)
OFFSET CONVER. MODE 2

3.2 Confirmation of convergence data

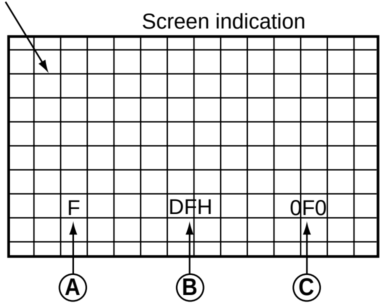
The convergence coarse adjustment modes change cyclically, as shown below, with each press of the DOT key in FACTORY mode:

Convergence coarse adjustment

→ DOT key (pressed once) : OFFSET CONVER. MODE 1
↓
DOT key (pressed twice) : OFFSET CONVER. MODE 2
↓
DOT key (pressed three times) : OFFSET CONVER. MODE 3
Cyclical change

Check whether the data of MODE 1 and MODE 2 are as shown in Table 2.

The cross-hatch signal is generated inside the unit, and is automatically displayed in OFFSET CONVER. mode and MANUAL CONVERGENCE mode. You can turn on and off the cross-hatch signal with the YELLOW key.



Ⓐ

Screen mode:
F : FULL Z : ZOOM C : CINEMA
N : NATURAL H : FULL for HD
The Screen modes change cyclically with each press of the SCREEN mode key.

Ⓑ

Adjustment items can be selected with the numeric keys. See Table 2.

Ⓒ

Adjustment data:
MAX ↑ 1FF
100
001
CNT ● 000
3FF
2FF
MIN ↓ 200

Data can be adjusted with the VOL+ and VOL- keys.

Table 2 OFFSET CONVER DATA

OFFSET CONVER MODE 1						
Numeric Key	Adjustment Item	Screen Mode				
		F FULL	Z ZOOM	C CINEMA	N NATURAL	H HD FULL
1	DFH	0F0	0D0	0D0	0D0	100
2	DFV	070	070	070	070	070
3	HDP	010	010	010	010	010

OFFSET CONVER MODE 2						
Numeric Key	Adjustment Item	Screen Mode				
		F FULL	Z ZOOM	C CINEMA	N NATURAL	H HD FULL
1	HFP	0CC	0CC	0CC	0CC	0D0
2	HCP	00F	00F	00F	00F	015
3	HTP	047	047	047	047	044
4	HHD	0EE	0EE	0EE	0EE	0E9
5	HPW	00C	00C	00C	00C	00F
6	V1C	01F	029	025	022	01D
7	V1S	000	000	000	000	000
8	VFP	01D	02D	013	033	065

The above offset convergence values are common to the PRO-610 HD/510HD and SD-582HD5/532HD5.

If the offset convergence values are as indicated in Table 2, proceed to 3.3. If the values are not the same, adjust the values with the numeric keys and VOL +/– keys.

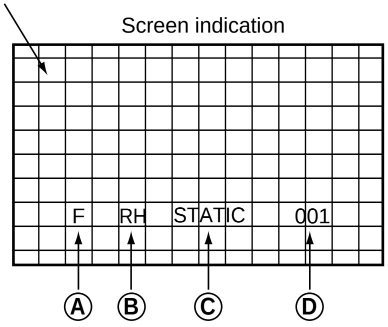
Example:
To check HDP in ZOOM mode of OFFSET CONVER. MODE 1
① Enter the FACTORY mode.
② Enter the OFFSET CONVER. MODE 1 by pressing the DOT key once.
③ Enter the ZOOM screen mode by pressing the SCREEN mode key once. (When the unit enters FACTORY mode, the screen mode automatically becomes FULL.)
④ Check the indication on the screen by pressing the numeric key 3.
Indication at the bottom of the screen : Z HDP 010
If the adjustment value is 010, adjustment is not required.
If the adjustment value is other than 010, adjust with the VOL + or VOL- key so that the value becomes 010.

3.3 Coarse Adjustment of the Green

(Proceed with 3.3 and afterwards when the DIGITAL CONV. Assy is not replaced.)
Select adjustment items (STATIC and SIZE of vertical and horizontal lines, etc.) for each GH and GV, and adjust to roughly eliminate distortion. (For GV, peripheral pin distortion adjustment is necessary.)
Press the DOT key three times to enter OFFSET CONVER. MODE 3.
Press the SCREEN mode key and proceed with the adjustment for each screen mode.

The cross-hatch signal is generated inside the unit, and is automatically displayed in OFFSET CONVER. mode and MANUAL CONVERGENCE mode. You can turn on and off the cross-hatch signal with the YELLOW key.

Screen indication



Ⓐ

Screen mode:
F : FULL
Z : ZOOM
C : CINEMA
N : NATURAL
H : FULL for HD

The Screen modes change cyclically with each press of the SCREEN mode key.

Ⓑ

Cyclically changes with the CH+ or CH- key as follows:

RH ↔ RV ↔ BH
↕ ↕
GV ↔ GH ↔ BV

Ⓒ

Adjustment items can be selected with the numeric keys.
See Table below.

- **Waveforms adjustable in the coarse adjustment of the green**

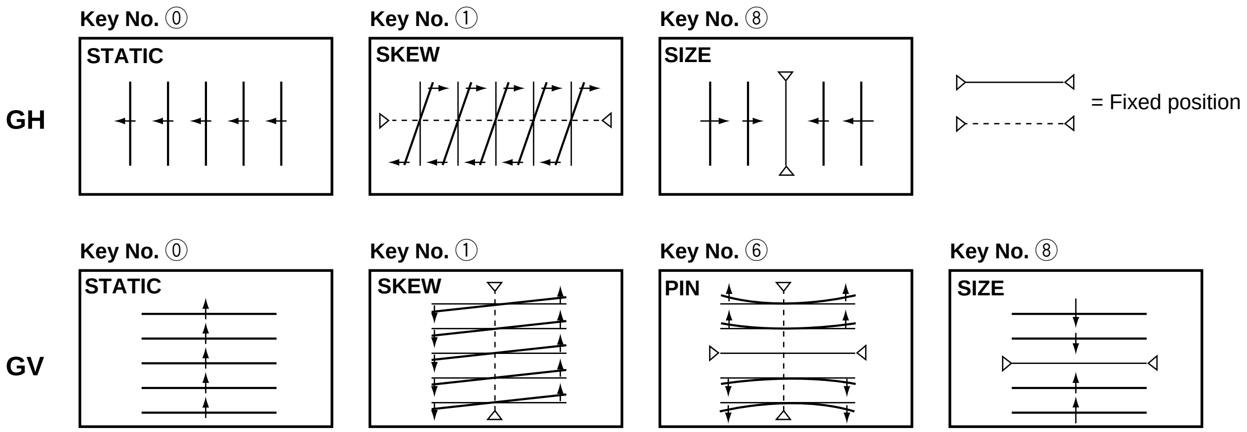
Numeric Key	GH	GV
0	STATIC	STATIC
1	SKEW	SKEW
6		PIN
8	SIZE	SIZE

Ⓓ

Adjustment data:
MAX ↑ 1FF
100
001
CNT ● 000
3FF
2FF
MIN ↓ 200

Data can be adjusted with the VOL+ and VOL- keys.

- **Pattern for each adjustment item**



Note 1: When the green CRT is replaced, or when the deflection yoke for the green is replaced, prior to the convergence adjustment, tune the center of the image to the center of the screen by turning the centering magnet.
Note 2: When the CONVER. AMP Assy or DIGITAL CONV. Assy is replaced, make coarse adjustment as shown in 3.3 above.

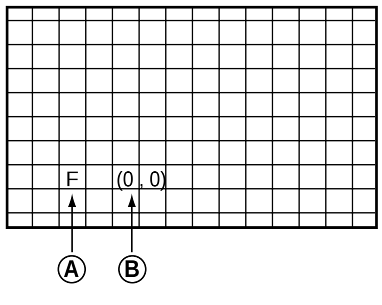
3.4 Fine-adjustment of the Green

Enter MANUAL CONVERGENCE mode by pressing the SET/ENTER key, and make adjustments. Repeatedly make the coarse adjustment as shown in 3.3 if necessary. Proceed with the adjustment for each screen mode. Adjusted values for the green become the standard for the red and the blue.

3.4.1

In MANUAL CONVERGENCE mode entered by pressing the SET/ENTER key, the display becomes as shown below:

Screen indication



Ⓐ

Screen mode:
F : FULL
Z : ZOOM
C : CINEMA
N : NATURAL
H : FULL for HD

The Screen modes change cyclically with each press of the SCREEN mode key.

Ⓑ

Coordinates where the cursor (adjustment point) is located
There are 72 adjustment points (8,9) on the coordinates for FULL, ZOOM, CINEMA, NATURAL and FULL for HD modes, but the coordinates actually used for adjustment are as follows (the coordinates outside the ranges indicated below are outside the screen, and adjustment will not have any effect on the screen):

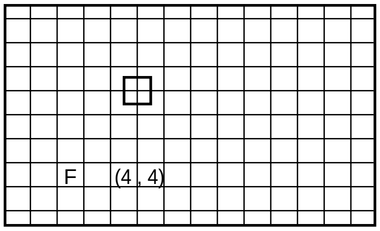
FULL : (0, 1) to (7, 9)
ZOOM : (0, 1) to (7, 7)
CINEMA : (0, 1) to (7, 8)
NATURAL : (0, 1) to (7, 8)
HD for FULL : (0, 1) to (7, 9)

(X, Y): X=abscissa, Y=ordinate
Some coordinates may be outside the screen and invisible.
The point at coordinates (0, 0) is at the upper left of the screen.

3.4.2

Move the cursor to a point to be adjusted with the cursor move keys.

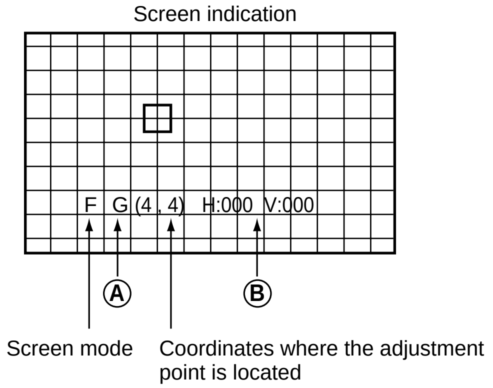
Screen indication



Note: The actual shape of the cursor is " [ ] ".
The position of the cursor in this figure is different from the actual position on the screen.

3.4.3

Press the SET/ENTER key when the point to be adjusted is determined.



Ⓐ

Color to be adjusted:
G: GREEN, R: RED, B: BLUE
To change colors, use the CH+ or CH- key.
The colors change cyclically as follows:
With CH+ : R → B → G → R
With CH- : R → G → B → R

Ⓑ

H : *** Adjustment data in the horizontal direction
V : *** Adjustment data in the vertical direction
(***= hexadecimal number)

Data		
MAX	↑	1FF
		100
		001
CNT	●	000
		3FF
		2FF
MIN	↓	200

For adjustment, move the Line to the desired direction with the cursor keys.

To move the Horizontal Line upward, press the " ▲ " key.
(The value decreases.)
To move the Horizontal Line downward, press the " ▼ " key.
(The value increases.)
To move the Vertical Line to the left, press the " ◀ " key.
(The value decreases.)
To move the Vertical Line to the right, press the " ▶ " key.
(The value increases.)

- To select one color, use the SEARCH key for the red, SELECT key for the green, FREEZE key for the blue. Pressing this key toggles color muting on or off.
- To mute all the colors, press the DISPLAY key. To release muting, press the SEARCH, SELECT, or FREEZE key.
- To erase the cross hatch, press the YELLOW key. Pressing this key toggles between display of the cross hatch screen and the input screen.
- To change the brightness of the input screen, use the VOL+ or VOL- key. The brightness increases with the VOL+ key (CONTRAST +10) and decreases with the VOL- key (CONTRAST -40). (The brightness can be changed only in Fine-adjustment mode. The brightness of the cross hatch screen cannot be changed.)

3.4.4

When adjustment of the selected point is finished, press the SET/ENTER key, then adjust the other adjustment points by repeating 3.4.1 to 3.4.4.

3.4.5

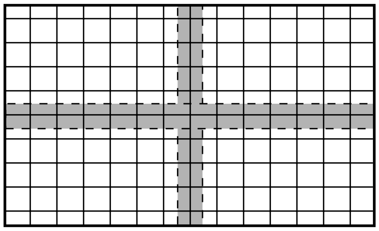
Make the adjustment for the green in each screen mode, and use the green as the standard screen for the red and the blue. To change screen modes, use the SCREEN mode key.

Note: Some coordinates for adjustment points are located outside the screen. Be sure not to make adjustments on those points, because adjustment of those coordinates will have little effect on the screen.

● Adjustment Technique

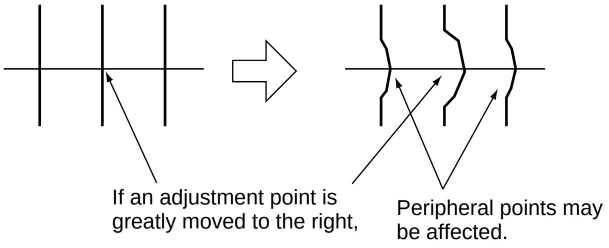
1st step

Adjust so that the vertical and horizontal lines forming a cross at the center of the screen become straight. Check also the screen size and the linearity of the horizontal and vertical lines.

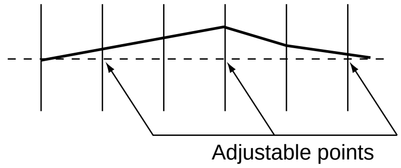


- See "3.3 Coarse adjustment of the green."
  Adjust GH STATIC, SKEW and SIZE, and GV STATIC, SKEW, PIN and SIZE to correct the screen location, tilt, screen information volume, and peripheral pin distortion.
- See "3.4 Fine-adjustment of the green."
  Fine-adjust the linearity of the vertical and horizontal lines forming a cross at the center of the screen.

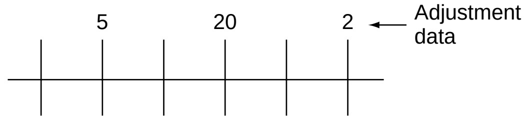
Note: In principle, only the selected point is changed in MANUAL CONVER. mode. However, as the adjusted data (amount of adjustment) increase, peripheral points may be affected. So be sure not to greatly change the adjustment data of one point, but change peripheral points at the same time. See the examples below.


If an adjustment point is greatly moved to the right,
Peripheral points may be affected.

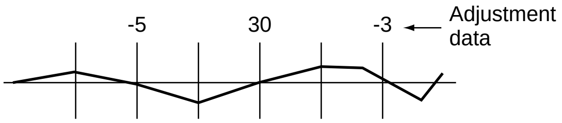
In a case of an error in convergence:



Good adjustment:

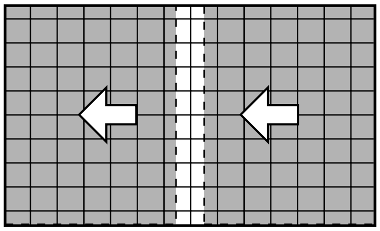


Bad adjustment:



2nd step

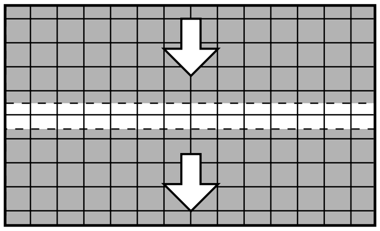
Adjust so that the vertical lines become straight, taking care to preserve proper screen information volume and the linearity. Adjust the right half of the screen first, then the left half. (See 3.4.)



Right half : Adjust from the edge toward the center.
Left half : Adjust from the center toward the edge.

3rd step

Adjust so that the horizontal lines become straight. Adjust the upper half of the screen first, then the lower half. (See 3.4.)



Upper half : Adjust from the edge toward the center.
Lower half : Adjust from the center toward the edge.

4th step

Repeat 2nd and 3rd steps to take total balance. Then the adjustment for the green is completed.
To return from the fine adjustment mode to the coarse adjustment mode, press the MENU key once, then the DOT key.

Note: When the MENU key is pressed to quit MANUAL CONVERGENCE mode, the display will be unstable for several seconds. This is because the adjustment data are being written to the EEPROMs, and is not a malfunction. Do not perform any operation (power on/off, or pressing keys on the remote control unit or on the main unit, etc.) during this period, because doing so may affect your adjustment data.

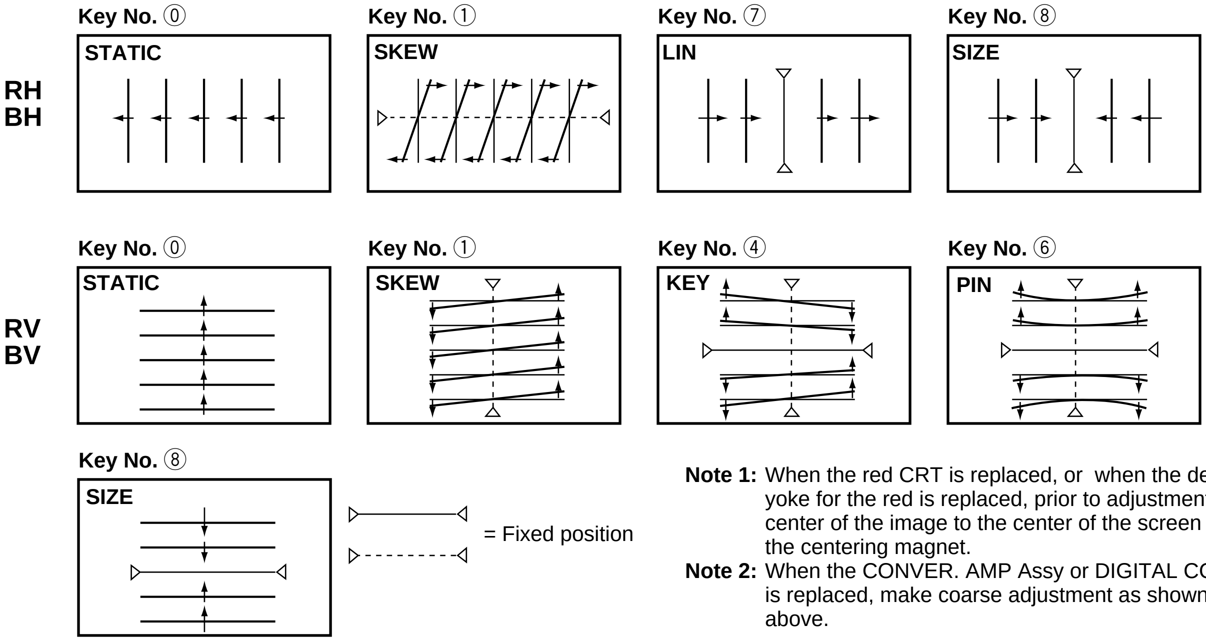
3.5 Coarse Adjustment of the Red

After the green adjustment is completed, quit MANUAL CONVERGENCE mode by pressing the MENU or MUTING key, then press the DOT key three times to enter OFFSET CONVER. MODE 3.
Select adjustment items for RH and RV, and roughly correct distortion to converge with the green. Adjustment is required for each screen mode

For adjustable items of the red and the blue, see the following table.

Numeric Key	RH	RV	BH	BV
0	STATIC	STATIC	STATIC	STATIC
1	SKEW	SKEW	SKEW	SKEW
4		KEY		KEY
6		PIN		PIN
7	LIN		LIN	
8	SIZE	SIZE	SIZE	SIZE

- **Pattern for each adjustment item**



Note 1: When the red CRT is replaced, or when the deflection yoke for the red is replaced, prior to adjustment, tune the center of the image to the center of the screen by turning the centering magnet.

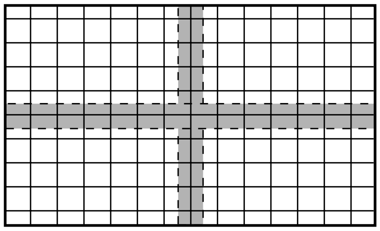
Note 2: When the CONVER. AMP Assy or DIGITAL CONV. Assy is replaced, make coarse adjustment as shown in 3.5 above.

3.6 Fine-adjustment of the Red

To fine-adjust the red, press the SET/ENTER key to enter MANUAL CONVERGENCE mode. Repeat the coarse adjustment described in "3.5 Coarse Adjustment of the Red" if necessary. Make adjustment for each SCREEN mode, and eliminate distortion to converge with the green.

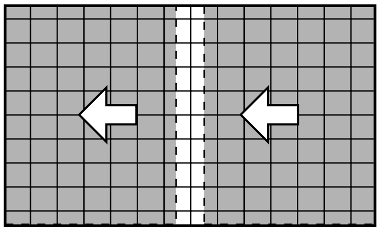
3.6.1

Press the SET/ENTER key to enter MANUAL CONVERGENCE mode, and make adjustment in the same manner as with the green. First, adjust the vertical and horizontal the red lines at the center of the screen so that they converge with the green center lines.



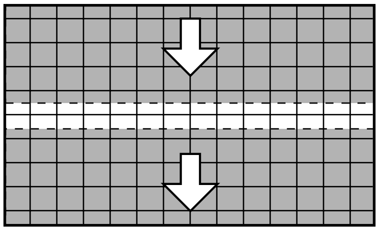
3.6.2

Adjust the red vertical lines so that they converge with the green vertical lines. Proceed to adjustment of the right half of the screen, then the left half. Adjustment should be done from the part where convergence is greatly dislocated.



3.6.3

Adjust the red horizontal lines so that they converge with the green horizontal lines. Proceed to adjustment of the upper half of the screen, then the lower half. Adjustment should be done from the part where convergence is greatly dislocated.



3.6.4

Repeat the adjustments described in 3.6.2 and 3.6.3 so that all the red vertical and horizontal lines converge with the green lines.
(Completion of one screen mode)

3.6.5

Repeat procedures 3.6.2 through 3.6.4 for the other screen modes. (Completion of the red adjustment)

3.7 Coarse Adjustment and Fine Adjustment of the Blue

Make coarse and fine-adjustments of the blue in the same manner as with the red, described in 3.5 and 3.6.

3.8 Confirmation of Adjustment

After the green, red, and blue adjustments are finished, check convergence errors with the patterns for all three colors on the monitor.

Check the patterns in all SCREEN modes, and if any error in convergence is recognized, readjust convergence in MANUAL CONVER. mode.

Note: Be sure NOT to change the green pattern during readjustment.

IMPORTANT!

(1) When all the adjustments are completed, or when adjustment should be temporarily interrupted, adjustment data must be written to the EEPROM, in the following manner:

When all the adjustments are completed, or to interrupt adjustment, press the MENU key to quit Convergence Adjustment mode. The display will be unstable for several seconds, but this is because the data are being written to the EEPROM. Wait without doing anything until the display becomes stable, which means writing of data to the EEPROM is finished.

If the power of the TV is turned off (standby) during Convergence Adjustment mode (coarse and fine-adjustments), turn on the TV, enter FACTORY mode, and enter Convergence Adjustment mode by pressing the SET/ENTER key. Then press the MENU key. The data will be written to the EEPROM as described above.

(2) Do NOT turn off the main power during or after convergence adjustment.

If you do so, the adjusted data may be lost. If the data are lost, you must make all the adjustments again.

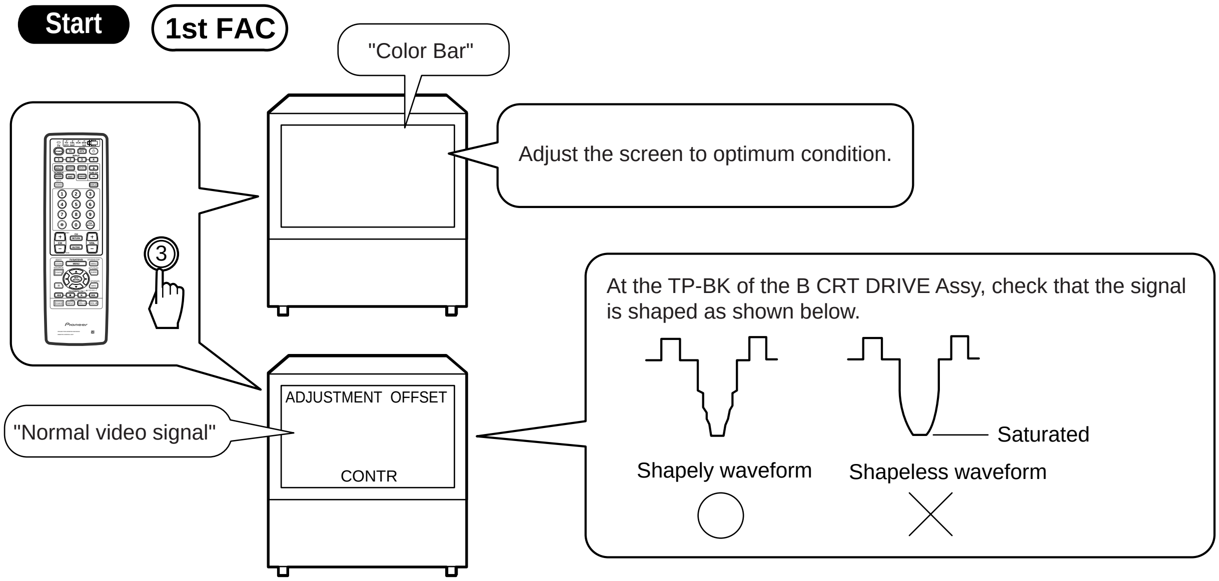
(3) When the CENTER POINT (test cross) or MULTI-POINT (user convergence) adjustments have been made by a user, and if the unit enters FACTORY Convergence Adjustment mode (with the DOT and SET/ENTER keys), the user's adjustment data will be all cleared and returned to the factory-preset values.

Be sure NOT to enter this Convergence Adjustment mode except when a repair related to convergence or a repair that requires convergence adjustment later, is needed.

If you inadvertently enter Convergence Adjustment mode, readjust the convergence.

7 White Balance Adjustment

7-1 Contrast Adjustment



Adjust the screen to optimum condition.

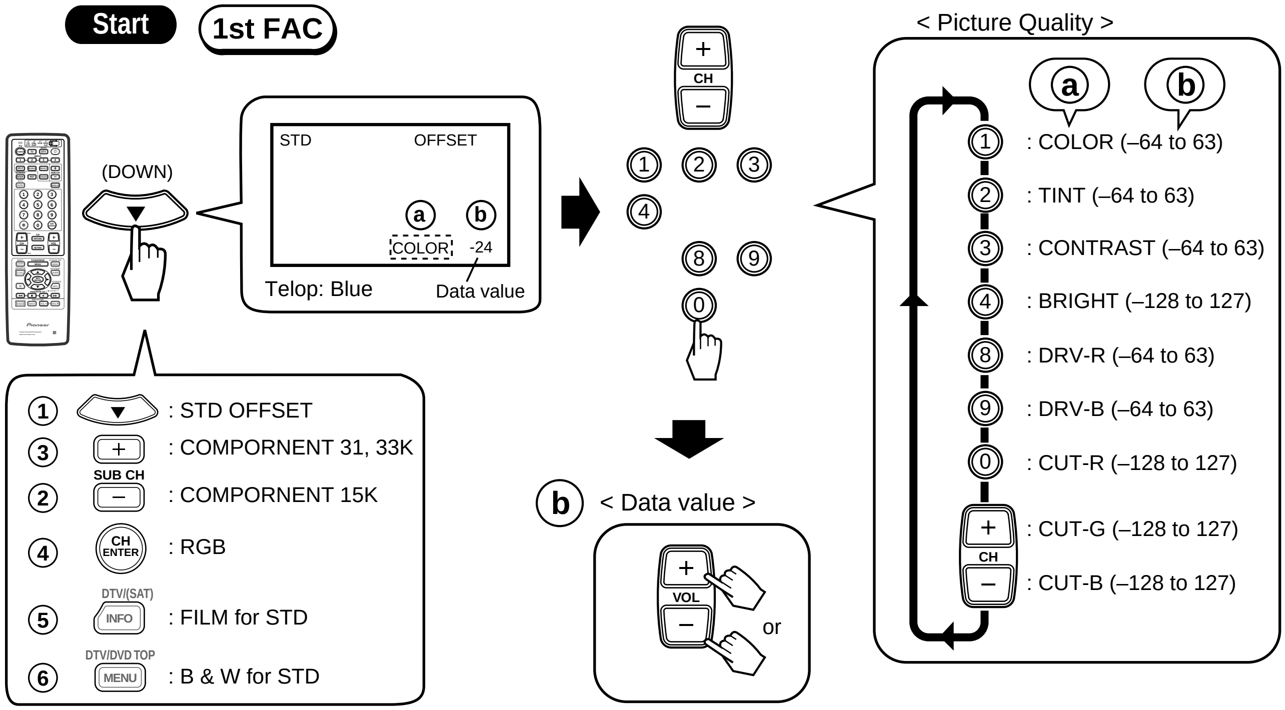
At the TP-BK of the B CRT DRIVE Assy, check that the signal is shaped as shown below.

After the STD adjustment is complete, adjust the COMP 15K, COMP 31K, 33K RGB, COLOR TEMP FILM or STD and COLOR TEMP B&W for STD.

❼-2 White Balance Adjustment

This mode is to set the standard picture quality for a normal picture.

Start **1st FAC**

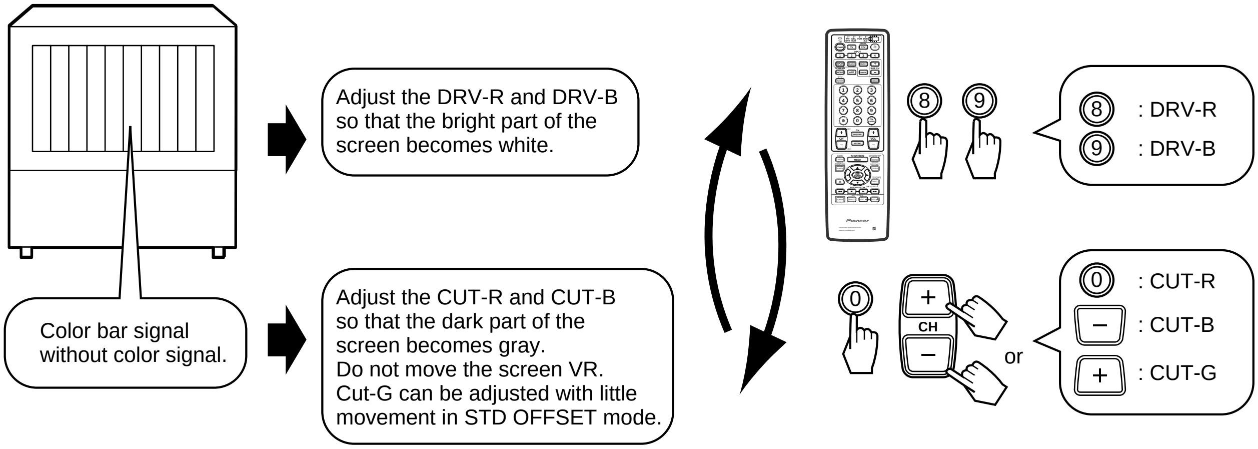


1 ▼ : STD OFFSET
3 + : COMPORNENT 31, 33K
SUB CH
2 – : COMPORNENT 15K
4 CH ENTER : RGB
DTV/(SAT)
5 INFO : FILM for STD
DTV/DVD TOP
6 MENU : B & W for STD

b < Data value >

< Picture Quality >

① : COLOR (–64 to 63)
② : TINT (–64 to 63)
③ : CONTRAST (–64 to 63)
④ : BRIGHT (–128 to 127)
⑧ : DRV-R (–64 to 63)
⑨ : DRV-B (–64 to 63)
⓪ : CUT-R (–128 to 127)
CH + : CUT-G (–128 to 127)
CH – : CUT-B (–128 to 127)



Color bar signal without color signal.

Adjust the DRV-R and DRV-B so that the bright part of the screen becomes white.

Adjust the CUT-R and CUT-B so that the dark part of the screen becomes gray.
Do not move the screen VR.
Cut-G can be adjusted with little movement in STD OFFSET mode.

⑧ : DRV-R
⑨ : DRV-B

⓪ : CUT-R
– : CUT-B
+ : CUT-G

Note :
Not all adjustments described above can be made for COLOR TEMP FILM for STD and COLOR TEMP B&W for STD.
Refer to the following adjustment procedure.

● Adjustment Procedure of White Balnce

OFFSET Data Table

<table>
<tr><th rowspan="3">COLOR TEMP Setting</th><th colspan="7">Without RGB Input</th><th colspan="4">RGB Input</th></tr>
<tr><td>STD</td><td>NEWS</td><td>LIVE</td><td>FILM STD</td><td>FILM MOVIE</td><td>B&W STD</td><td>B&W MOVIE</td><td>NEWS</td><td>LIVE</td><td>FILM</td><td>B&W</td></tr>
<tr><td>I</td><td>J</td><td>K</td><td>L</td><td>M</td><td>V</td><td>X</td><td>β</td><td>γ</td><td>Y</td><td>Z</td></tr>
<tr><th rowspan="2">User Mode</th><td colspan="3">MOVIE</td><td colspan="3">GAME</td><td colspan="5" rowspan="2"></td></tr>
<tr><td colspan="3">E</td><td colspan="3">F</td></tr>
<tr><th rowspan="4">Input Signal</th><td colspan="2">TV</td><td colspan="2">COMPORNENT 15K</td><td colspan="2">COMPORNENT 31K 33K</td><td colspan="2">RGB</td><td colspan="3" rowspan="2"></td></tr>
<tr><td colspan="2">B</td><td colspan="2">C</td><td colspan="2">D</td><td colspan="2">T</td></tr>
<tr><td colspan="11">STD OFFSET</td></tr>
<tr><td colspan="11">A</td></tr>
</table>

Adjustments are required for A, C, D, T, L, and V in the table above. Data in other parts are fixed. (I="0")
Proceed with the adjustments in the following order:

Adjustment	Direct key		Picture quality data on the screen
(1) STD OFFSET	DOWN	A	Adjustment of all standard picture qualities
(2) COMPONENT 15K	SUB CH-	A+C	Adjustment of C
(3) COMPONENT 31, 33K	SUB CH+	A+D	Adjustment of D
(4) RGB	CH ENTER	A+T	Adjustment of T
(5) FILM for STD	INFO	A+L	Adjustment of L
(6) B&W for STD	DTV MENU	A+V	Adjustment of V

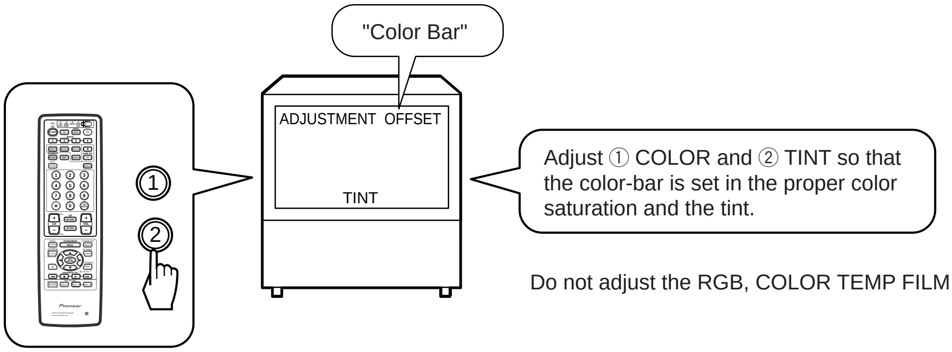
Make adjustment only for items described as ADJ in the following table.
Do NOT change other data.
Other data are adjusted in factory shipment by Fix data of the following table . (refer to page 215.)

- First, perform "(1) STD OFFSET", then perform adjustments (2), (3) and (4) so that the same picture quality (color temperature) as achieved in (1) is obtained.
- In adjustment (5), make the whole picture more reddish than in (1), and in adjustment (6), make it more reddish.

- When readjusting, once "(1) STD OFFSET" is adjusted, the data for other input signals (component, etc.) revert to the factory-preset values, in principle.
- After the adjustment of STD OFFSET is completed, check other picture quality modes by switching color temperatures and signals.
  It is OK if picture quality does not deviate greatly when input signal is changed (composite, component 15K, etc.).
  Furthermore, it is OK if color temperature changes when color remperarure is changed.
  With this model, five color temperature switching modes are provided. In FILM and B&W modes, a white part appears to be reddish in general because of their color temperature settings.

7 -3 Color/Tint Adjustment

Start **1st FAC**



Adjust ① COLOR and ② TINT so that the color-bar is set in the proper color saturation and the tint.

Do not adjust the RGB, COLOR TEMP FILM and B&W.

OFFSET DATA (VIDEO)

ADJ :Adjustment item
The numerical value is shipping a set value in the factory.
A set value is data of 1999.11 present provinces.

DIRECT KEY			
OFFSET MODE		MODEL	
KEY	ADJ NAME	PRO-610HD PRO-510HD	SD-582HD5 SD-532HD5
DOWN			
STD OFFSET A			
1	COLOR	ADJ	ADJ
2	TINT	ADJ	ADJ
3	CONTRAST	ADJ	ADJ
4	BRIGHT	ADJ	ADJ
5	SHARPNESS	0	0
6	DETAIL	–50	–15
7	S. V. M	0	0
8	R DRV	ADJ	ADJ
9	B DRV	ADJ	ADJ
0	R CUT	ADJ	ADJ
CH+	G CUT	ADJ	ADJ
CH–	B CUT	ADJ	ADJ
SUB CH –			
COMPONENT 15K C			
1	COLOR	ADJ	ADJ
2	TINT	ADJ	ADJ
3	CONTRAST	ADJ	ADJ
4	BRIGHT	0	0
5	SHARPNESS	0	0
6	DETAIL	0	0
7	S. V. M	0	0
8	R DRV	ADJ	ADJ
9	B DRV	ADJ	ADJ
0	R CUT	ADJ	ADJ
CH+	G CUT	ADJ	ADJ
CH–	B CUT	ADJ	ADJ
SUB CH+			
COMPONENT 31, 33K D			
1	COLOR	ADJ	ADJ
2	TINT	ADJ	ADJ
3	CONTRAST	ADJ	ADJ
4	BRIGHT	0	0
5	SHARPNESS	–20	–20
6	DETAIL	92	127
7	S. V. M	0	0
8	R DRV	ADJ	ADJ
9	B DRV	ADJ	ADJ
0	R CUT	ADJ	ADJ
CH+	G CUT	ADJ	ADJ
CH–	B CUT	ADJ	ADJ
RED			
TV OFFSET B			
1	COLOR	–10	–10
2	TINT	0	0
3	CONTRAST	0	0
4	BRIGHT	0	0
5	SHARPNESS	0	0

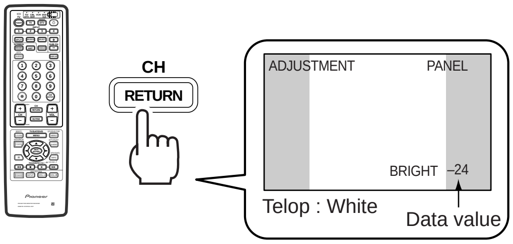
DIRECT KEY			
OFFSET MODE		MODEL	
KEY	ADJ NAME	PRO-610HD PRO-510HD	SD-582HD5 SD-532HD5
BLUE (cyclically)			
MOVIE OFFSET E			
1	COLOR	–11	–30
2	TINT	–13	–11
3	CONTRAST	–27	–14
4	BRIGHT	0	0
5	SHARPNESS	–20	–20
6	DETAIL	30	30
8	R DRV	1	–2
9	B DRV	4	6
0	R CUT	–5	8
CH+	G CUT	–3	5
CH–	B CUT	–3	4
GAME OFFSET F			
1	COLOR	0	0
2	TINT	0	0
3	CONTRAST	–43	–28
4	BRIGHT	0	0
5	SHARPNESS	–35	–35
6	DETAIL	0	0
8	R DRV	0	3
9	B DRV	8	7
0	R CUT	4	13
CH+	G CUT	7	13
CH–	B CUT	3	11
CH ENTER			
RGB OFFSET T			
3	CONTRAST	ADJ	ADJ
4	BRIGHT	ADJ	ADJ
8	R DRV	ADJ	ADJ
9	B DRV	ADJ	ADJ
0	R CUT	ADJ	ADJ
CH+	G CUT	ADJ	ADJ
CH–	B CUT	ADJ	ADJ
INFO			
COLOR TEMP FILM for STD L			
3	CONTRAST	ADJ	ADJ
8	R DRV	ADJ	ADJ
9	B DRV	ADJ	ADJ
0	R CUT	ADJ	ADJ
CH+	G CUT	ADJ	ADJ
CH–	B CUT	ADJ	ADJ
DTV MENU			
COLOR TEMP B&W for STD V			
3	CONTRAST	ADJ	ADJ
8	R DRV	ADJ	ADJ
9	B DRV	ADJ	ADJ
0	R CUT	ADJ	ADJ
CH+	G CUT	ADJ	ADJ
CH–	B CUT	ADJ	ADJ

DIRECT KEY			
OFFSET MODE		MODEL	
KEY	ADJ NAME	PRO-610HD PRO-510HD	SD-582HD5 SD-532HD5
GREEN (cyclically)			
COLOR TEMP NEWS for STD J			
3	CONTRAST	–6	–6
8	R DRV	–1	–1
9	B DRV	16	16
0	R CUT	3	3
CH+	G CUT	3	3
CH–	B CUT	1	1
COLOR TEMP LIVE for STD K			
3	CONTRAST	–1	–1
8	R DRV	–5	–5
9	B DRV	7	7
0	R CUT	2	2
CH+	G CUT	3	3
CH–	B CUT	1	1
COLOR TEMP FILM for MOVIE M			
3	CONTRAST	0	0
8	R DRV	9	1
9	B DRV	–10	–15
0	R CUT	–1	0
CH+	G CUT	0	0
CH–	B CUT	1	0
COLOR TEMP B&W for MOVIE X			
3	CONTRAST	–1	0
8	R DRV	15	6
9	B DRV	–17	–22
0	R CUT	1	1
CH+	G CUT	2	2
CH–	B CUT	3	1
GREEN (cyclically)			
COLOR TEMP NEWS for RGB β			
3	CONTRAST	–6	–6
4	BRIGHT	0	0
8	R DRV	–1	–1
9	B DRV	16	16
0	R CUT	3	3
CH+	G CUT	3	3
CH–	B CUT	1	1
COLOR TEMP LIVE for RGB γ			
3	CONTRAST	–1	–1
4	BRIGHT	0	0
8	R DRV	–5	–5
9	B DRV	7	7
0	R CUT	2	2
CH+	G CUT	3	3
CH–	B CUT	1	1
COLOR TEMP FILM for RGB Y			
3	CONTRAST	–1	–1
4	BRIGHT	0	0
8	R DRV	14	14
9	B DRV	–10	–10
0	R CUT	1	1
CH+	G CUT	3	3
CH–	B CUT	4	4
COLOR TEMP B&W for RGB Z			
3	CONTRAST	–1	–1
4	BRIGHT	0	0
8	R DRV	18	18
9	B DRV	–17	–17
0	R CUT	–1	–1
CH+	G CUT	2	2
CH–	B CUT	4	4

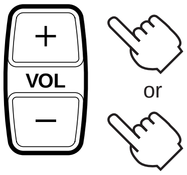
❽ Panel Adjustment

Start **1st FAC**

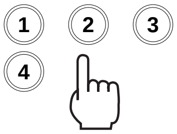
- Mode for adjusting the brightness, contrast LEFT and RIGHT of the gray part (panel) of the 4:3 normal screen.


CH
RETURN
ADJUSTMENT
PANEL
BRIGHT –24
Telop : White
Data value

<Data value section>



<Adjustment item section>



① : BRIGHT (–64 to 63)

② : CONTRAST (–64 to 63)

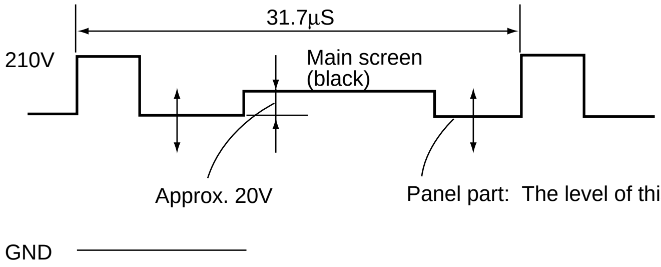
③ : LEFT (–128 to 127)

④ : RIGHT (–128 to 127)

Procedures

① Send the black-burst signal to the INPUT 1 connector.
Enter Adjustment mode by following the procedures described above.

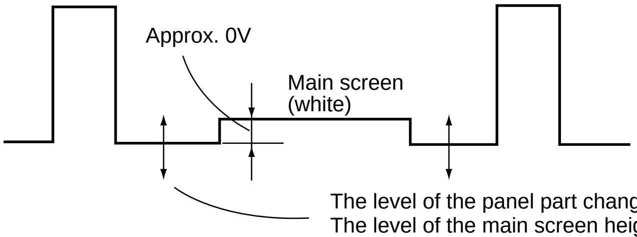
② With BRIGHT, adjust the gray part (panel) of the screen.
By observing TP5151 of the GREEN CRT DRIVE assembly with the oscilloscope, , adjust the brightness level which is low by 20V from Black level of the main screen.


31.7µS
210V
Main screen (black)
Approx. 20V
GND

Panel part: The level of this part changes with the BRIGHT data.

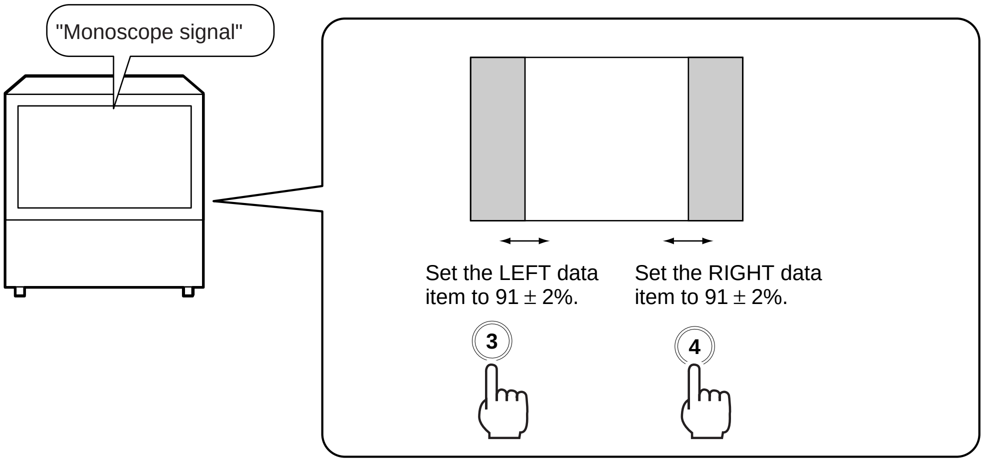
③ Switch the input signal to a 100%-white signal.
Adjust the panel part and the main screen with CONTRAST.
Observe the same site as described in Step ② above, and adjust the amplitude of the luminosity.

Adjust so that the level of the luminosity of the panel and that of the main screen become the same.


Approx. 0V
Main screen (white)

The level of the panel part changes with the CONTRAST data.
The level of the main screen heightens or lowers in the reverse direction.

● Size Adjustment of the Panel Part of the 4:3 Normal Screen



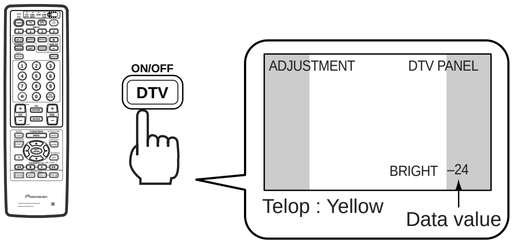
Set the LEFT data item to 91 ± 2%.

Set the RIGHT data item to 91 ± 2%.

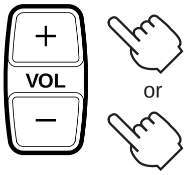
9 Panel Adjustment for DTV (PRO-610HD, PRO-510HD ONLY)

Start **1st FAC**

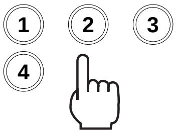
- Mode for adjusting the brightness, contrast LEFT and RIGHT of the gray part (panel) of the 4:3 normal screen of the DTV tuner.



<Data value section>



<Adjustment item section>



① : BRIGHT (–64 to 63)

② : CONTRAST (–64 to 63)

③ : LEFT (–128 to 127)

④ : RIGHT (–128 to 127)

Note :
- Adjustment required only for the PRO-510HD/610HD to which a BIB (SH-D07/D09) can be connected.
- No adjustment is needed for the SD-582HD5/532HD5.
- The adjustment procedures are the same as those described in "8 Panel Adjustment," except for the following:
- Send the black burst of the HD signal to the INPUT 1 connector.
- Send a 70%-white (if not available, 100%-white) HD signal to the INPUT 1 connector.
- As for the size adjustment, adjust so that the panel size becomes the same as that adjusted in "8 Panel Adjustment."

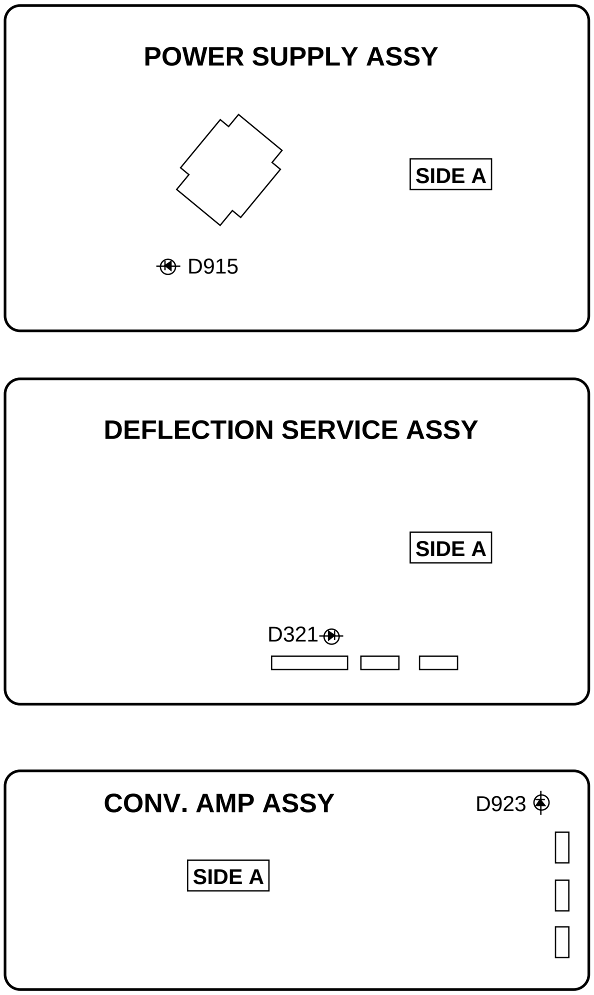
7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DIAGNOSIS METHOD

Various protection circuits are provided for this unit. When these protection circuits are activated, the power of the unit is shut down (P.D.: Power Down).
The defective parts can be easily diagnosed by observing the LEDs inside the following assemblies.

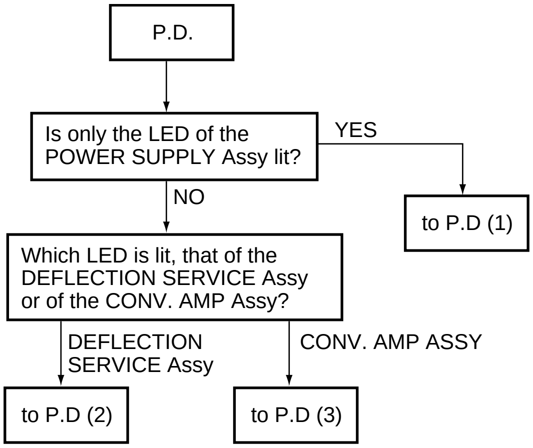
1. POWER SUPPLY Assy
   For models PRO-610HD/510HD : D915 in the AWV1795
   For models SD-582HD5/532HD5 : D915 in the AWV1808
2. DEFLECTION SERVICE Assy
   Common to all models : D321 in the AWV1796
   For service assembly : D321 in the AWV1809
3. CONV. AMP Assy
   Common to all models : D923 in the AWZ6456


POWER SUPPLY ASSY
SIDE A
D915
DEFLECTION SERVICE ASSY
SIDE A
D321
CONV. AMP ASSY
D923
SIDE A

LED points

How to diagnose a failure

The D915 LED of the POWER SUPPLY Assy always lights up when the power is turned off because of the protection circuits (P.D.).


P.D.
Is only the LED of the POWER SUPPLY Assy lit?
YES
NO
to P.D (1)
Which LED is lit, that of the DEFLECTION SERVICE Assy or of the CONV. AMP Assy?
DEFLECTION SERVICE Assy
CONV. AMP ASSY
to P.D (2)
to P.D (3)

1. P.D. (1)

Failure in the POWER SUPPLY Assy and the AUDIO Assy.
There are four main possibilities:

1. Abnormality in the regulator of the heater
2. Blown fuse(s) in secondary
3. Abnormality in RELAY (RY102)
4. Abnormality in AUDIO OUTPUT

Status	Causes	Check Items	Probable Defective Parts
D223 ANODE Hi	Abnormality in the regulator for the heater	The voltage of HT- at TP205 is NOT approx. 19 V, and that of the HT+ at TP204 is NOT approx. 26 V.	Q201, R202, D210, D209
D207 ANODE Hi	Blown fuse(s)	The voltage HT+ (approx. 26 V) at TP204 is NOT supplied.	CONV. AMP Assy and DEFLECTION SERVICE Assy
		The voltage (approx. 35 V) at TP203 is NOT supplied.	AUDIO Assy
		The voltage (approx. 11 V) at TP209 is NOT supplied.	VIDEO Assy
D911 ANODE Hi	Abnormality in RELAY	The RELAY signal is NOT high (ON) at TP904.	SIGNAL Assy
		P.D. even if the RELAY signal is high (ON) at TP904.	Q904, Q905 RY102, R102
D203 ANODE Hi	Abnormality in AUDIO OUTPUT	The SP line (CN5611) is disconnected.	Connect the SP line.
		The voltage at the negative electrode of the C5616 and C5617 is 5.2 V or more.	C5616, C5617 (VIDEO Assy)

Note: The anode of the diode is high only for a short time after the power is turned on until the protection circuits are activated (P.D.) The LEDs are lit by the HOLD circuit.

In a case when the power cannot be on with no LED lit, check the following:

1. Check if the FU101 fuse in the POWER SUPPLY Assy is blown.
2. Disconnect and check connector E1 (CN201) to see whether STB 5 V is supplied.
   If STB 5 V is supplied, replace the SIGNAL Assy. If STB 5 V is NOT supplied, replace the POWER SUPPLY Assy.
3. Disconnect and check connector E1 (CN201) to see whether AC CLK is supplied.
   If AC CLK is supplied, replace the SIGNAL Assy. If AC CLK is NOT supplied, replace the POWER SUPPLY Assy.

2. P.D. (2)

Failure in the DEFLECTION SERVICE Assy.
There are four main possibilities:

1. H. deflection overload detection (1)
2. H. deflection stopping detection
3. H. deflection overload detection (2)
4. X-ray protection

Status	Causes	Check Items	Probable Defective Parts
D312 ANODE Hi	Overload detection 1		Q309, Q324 (short-circuited between C and E)
D309 ANODE Hi	Stopping H. deflection	Is the connector of the deflection yoke plugged in?	Plug in the connector.
		No H. OSC signal at TP304 (F=31.5 kHz, Duty 50%)	IC301, Q309
		No DH. BLK signal at TP305	Q309
D615 ANODE Hi	Overload detection 2		Q612, Q613 (short-circuited between C and E)
		About one minute after the power is turned off, disconnect the K4 connector and turn on the power. Then the power is not turned off (no P.D.).	IC5101, IC5151 and IC5201 in the CRT DRIVE Assy
D621 ANODE Hi	X-ray protection	No change in the ABL voltage (no DC change) at Pin 12 of the CN305 when a 100%-white signal is repeatedly connected and disconnected	D2224 (short-circuited)of the SUB VIDEO Assy
			T601 (FBT) rare short

Note: The anode of the diode is high only for a short time after the power is turned on until the protection circuits are activated (P.D.) The LEDs are lit by the HOLD circuit.

Note that the power may be shut down when the voltages 130 V, 25 V, and 12 V from the POWER SUPPLY Assy are not supplied because the DEFLECTION SERVICE Assy is powered by the POWER SUPPLY Assy.

When overload detection mechanisms 1 and 2 are activated, the 130 V line is short-circuited. If the power switch is set to ON again in this condition, there may be a case where the power cannot be turned on, with just a whining sound, and where only the D915 LED in the POWER SUPPLY Assy is lit. If this happens, first replace only the DEFLECTION SERVICE Assy, disconnect the AC cord from the AC outlet or turn the main power switch OFF, and wait for five minutes. Then, turn on the power again. If the condition is ameliorated, only the DEFLECTION SERVICE Assy is defective. If the same symptom occurs, replace the POWER SUPPLY Assy. In the latter case, the DEFLECTION SERVICE Assy may not be defective.

Be sure to check the fuses in the POWER SUPPLY Assy because one or more may be blown as a result of short-circuiting of the load circuit of the DEFLECTION SERVICE Assy.

3. P.D. (3)

Failure in the CONV. AMP Assy
The following reason may be suspected:
1. V. deflection stopping detection

Status	Causes	Check Items	Probable Defective Parts
D923, P.D. LED, lit	V. deflection stopping	Check that the connectors (G1, G2, G3) of the convergence yoke are plugged in.	Plug in the connectors.
		Check that the connectors (G4, G5) of the DIGITAL CONV. Assy are plugged in.	Plug in the connectors.
		Check that the connector (H4) from the POWER SUPPLY Assy is plugged in to the DIGITAL CONV. Assy.	Plug in the connectors.
		Check that the connector (H3) from the DEFLECTION SERVICE Assy is plugged in to the DIGITAL CONV. Assy.	Plug in the connectors.
		Abnormality in V. BLK 2 waveform that is output from Pin 6 of the CN1653 in the DIGITAL CONV. Assy (too long a high period with the DC voltage on)	IC4802 in the SUB VIDEO Assy
		Abnormality in V. BLK 0 waveform that is output from Pin 2 of the CN1652 in the DIGITAL CONV. Assy (too long a high period with the DC voltage on)	IC301 in the DEFLECTION SERVICE Assy
		No waveform is output from Pin 1 of the CN902.	Q913, Q914

Note: The anode of the diode is high only for a short time after the power is turned on until the protection circuits are activated (P.D.) The LEDs are lit by the HOLD circuit.

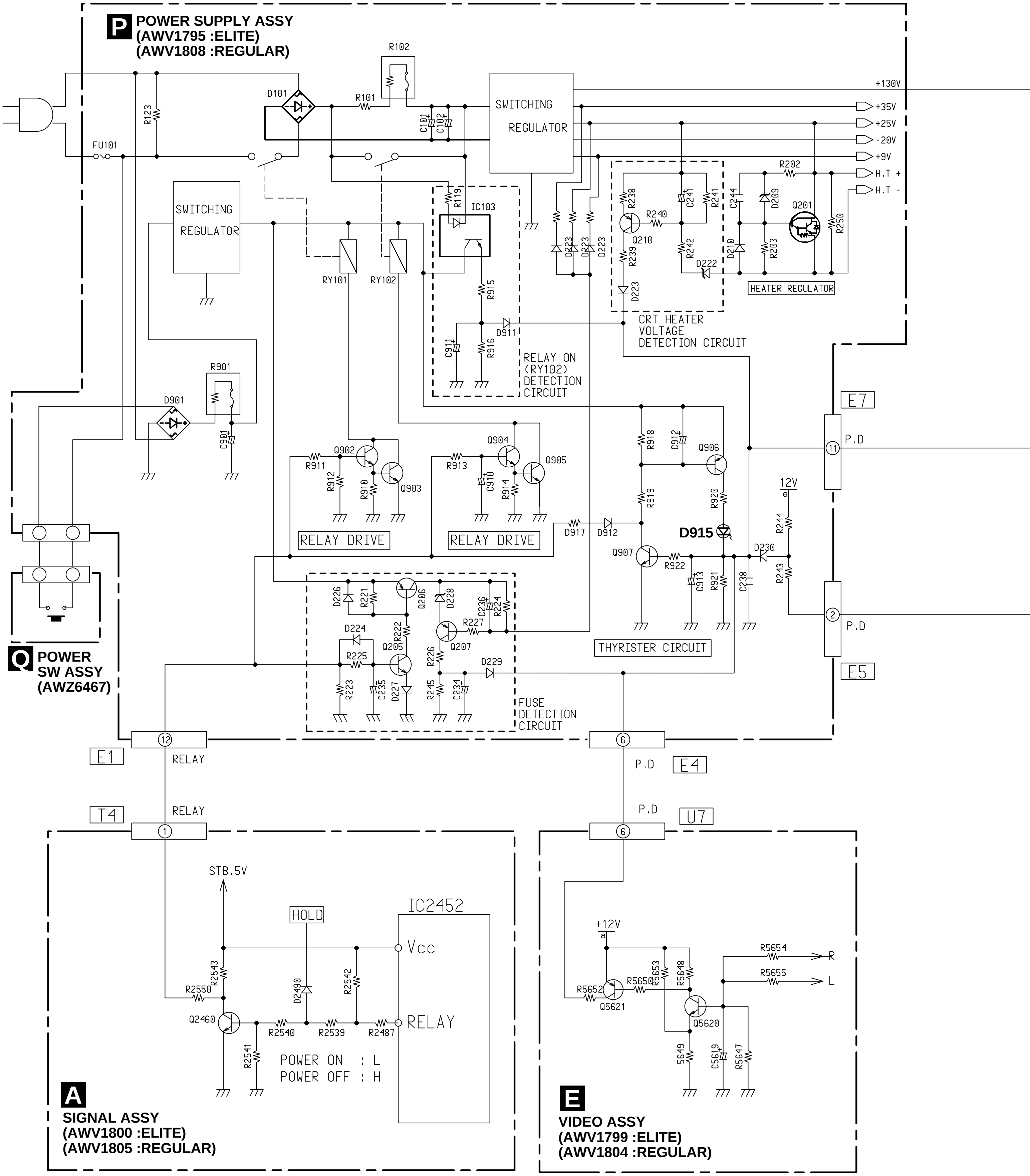
Be sure to check the fuses in the POWER SUPPLY Assy because one or more may be blown as a result of short-circuiting of the load circuit of the CONV. AMP Assy. See the table below.

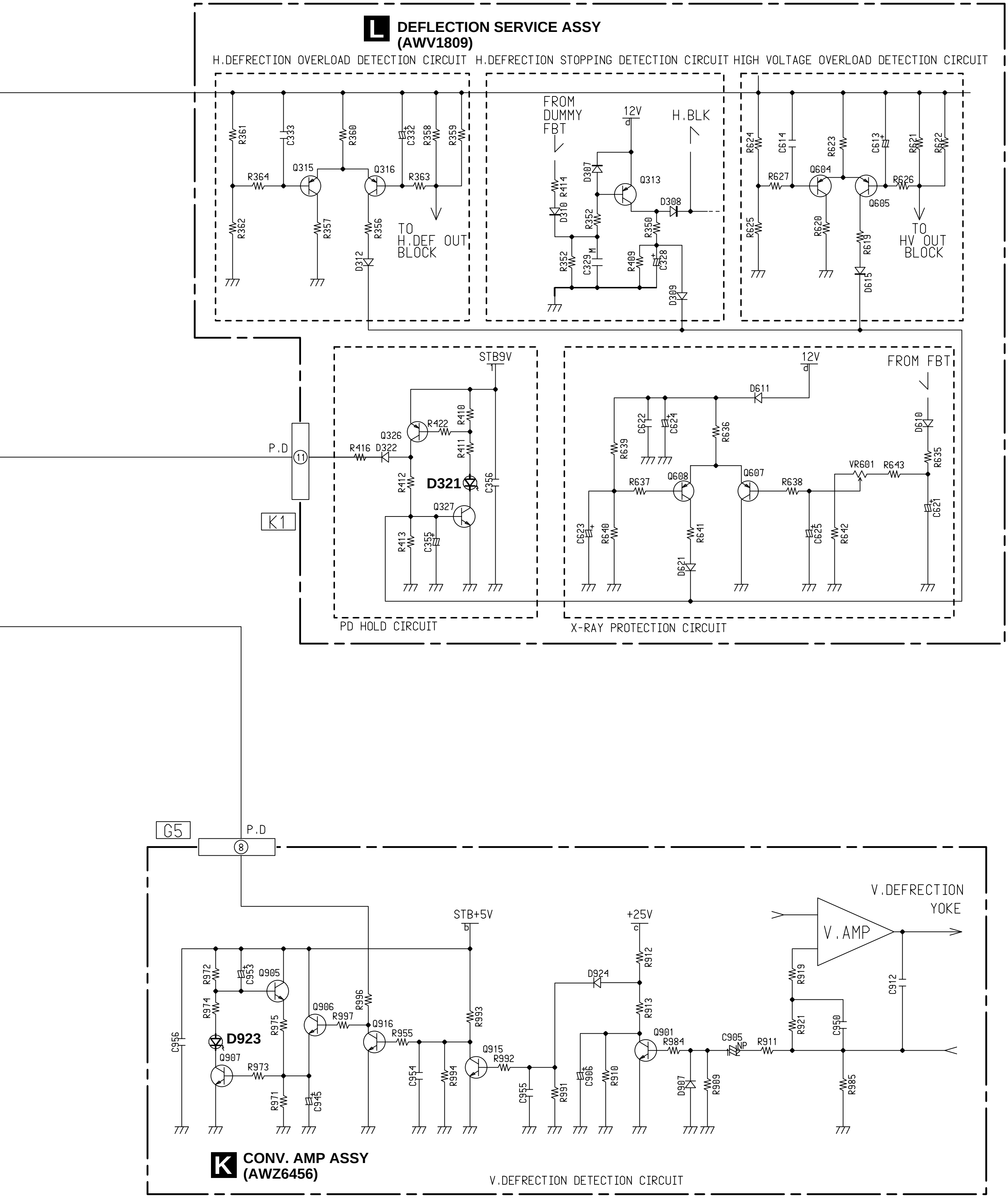
Note that the power may be shut down when the voltages 25 V, -20 V, +5 V and -5 V from the POWER SUPPLY Assy are not supplied because the CONV. AMP and DIGITAL CONVER. Assys are powered by the POWER SUPPLY Assy.

If the FU202 and FU204 fuses are blown, see the following table:

Causes	Check Items	Probable Defective Parts
Too high loading on the CONVER. AMP	Check that waveform signals are output from Pin 3 and Pin 5 of the CN901, CN902 and CN903, and that the DC element is not added to the signals.	IC901, IC903
CONVER. MUTING not activated	Check that the electric potential of Pin 3 and Pin 4 of IC901 and IC903 are at the same level when the power is turned on.	Q904, Q918

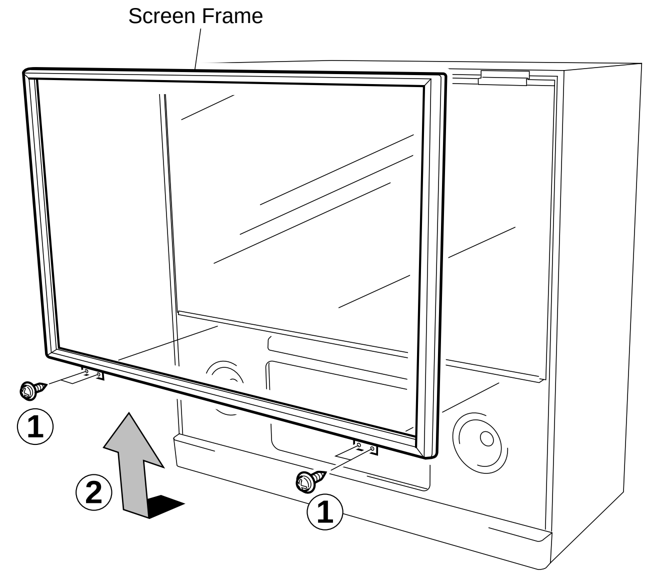
4. Block Diagram of the Protection Circuit

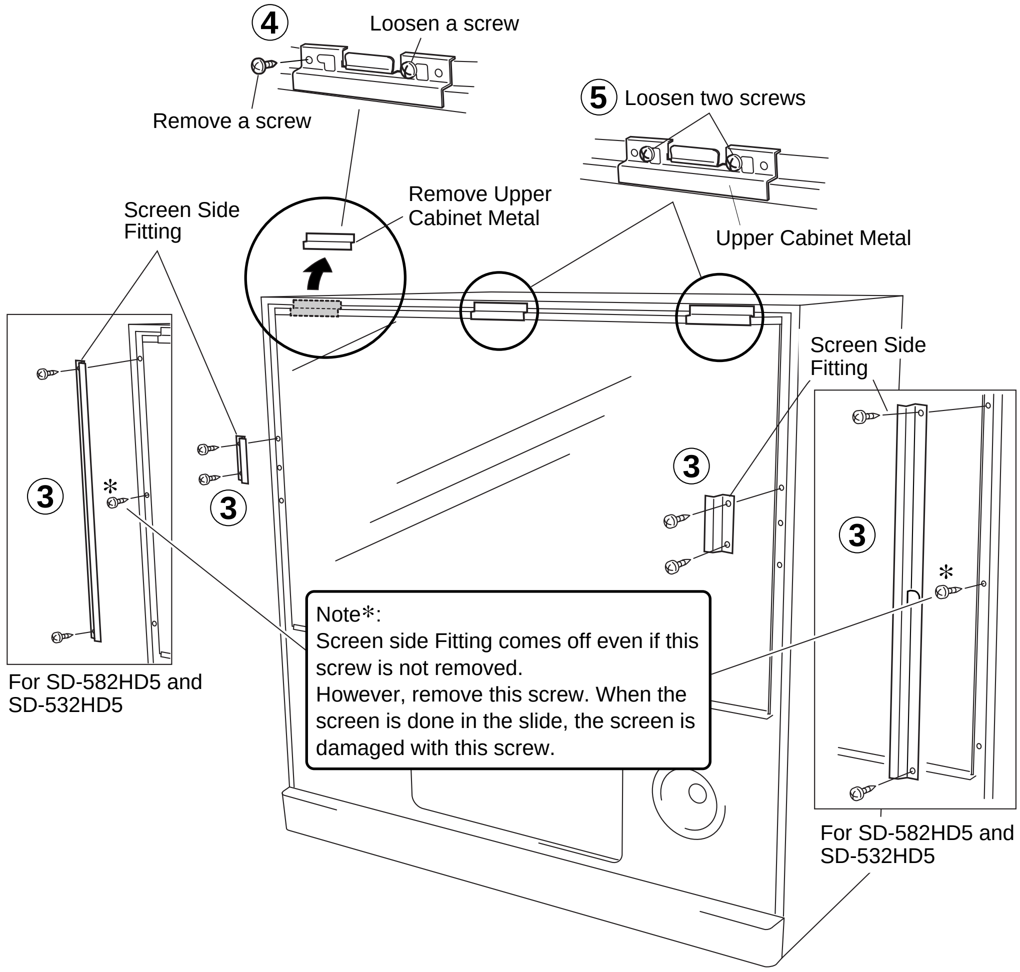

P
POWER SUPPLY ASSY
(AWV1795 :ELITE)
(AWV1808 :REGULAR)
R102
D101
R101
R123
FU101
C101
C102
SWITCHING
REGULATOR
+130V
+35V
+25V
-20V
+9V
H.T +
H.T -
R202
R119
IC103
SWITCHING
REGULATOR
RY101
RY102
R915
D911
C911
R916
RELAY ON
(RY102)
DETECTION
CIRCUIT
D223
D223
D223
R238
C241
R241
C244
D209
Q201
R240
Q210
R239
R242
D222
D210
R203
R250
D223
HEATER REGULATOR
CRT HEATER
VOLTAGE
DETECTION CIRCUIT
R901
D901
C901
Q902
R911
R912
R910
Q903
Q904
R913
C910
R914
Q905
RELAY DRIVE
RELAY DRIVE
E7
R918
C912
Q906
P.D
11
R919
R920
12V
R244
D917
D912
D915
D230
Q907
R922
C913
R921
C238
R243
THYRISTER CIRCUIT
2
P.D
E5
D226
R221
Q206
D228
C236
R224
R227
D224
R222
Q207
Q205
R225
R226
D229
R223
C235
D227
R245
C234
FUSE
DETECTION
CIRCUIT
Q
POWER
SW ASSY
(AWZ6467)
12
E1
RELAY
6
P.D
E4
T4
RELAY
1
P.D
U7
6
STB.5V
HOLD
IC2452
Vcc
R2543
D2490
R2542
R2550
Q2460
R2540
R2539
R2487
RELAY
R2541
POWER ON : L
POWER OFF : H
A
SIGNAL ASSY
(AWV1800 :ELITE)
(AWV1805 :REGULAR)
+12V
R5654
R
R5655
L
R5653
R5648
R5652
R5650
Q5621
Q5620
5649
C5619
R5647
E
VIDEO ASSY
(AWV1799 :ELITE)
(AWV1804 :REGULAR)


L
DEFLECTION SERVICE ASSY
(AWV1809)
H.DEFRECTION OVERLOAD DETECTION CIRCUIT
H.DEFRECTION STOPPING DETECTION CIRCUIT
HIGH VOLTAGE OVERLOAD DETECTION CIRCUIT
R361
C333
R360
C332
R358
R359
Q315
Q316
R364
R363
R362
R357
R356
D312
TO
H.DEF OUT
BLOCK
FROM
DUMMY
FBT
12V
d
H.BLK
D307
Q313
R414
D308
D310
R352
R350
R352
C329
M
R409
C328
D309
R624
C614
R623
C613
R621
R622
R627
Q604
R626
Q605
R625
R620
R619
D615
TO
HV OUT
BLOCK
STB9V
R410
R422
Q326
R411
P.D
⑪
R416
D322
D321
C356
R412
Q327
K1
R413
C355
PD HOLD CIRCUIT
12V
d
FROM FBT
D611
C622
C624
R636
D610
R639
R635
VR601
R643
Q608
Q607
R637
R638
C621
C623
R640
R641
C625
R642
D621
X-RAY PROTECTION CIRCUIT
G5
P.D
⑧
V.DEFRECTION
YOKE
STB+5V
b
+25V
c
V.AMP
R912
R919
C912
R972
C953
Q905
D924
R974
Q906
R996
R913
R921
C950
R975
R997
R993
C956
Q916
D923
R955
Q901
R984
C905
NP
R911
Q907
R973
Q915
R992
C954
R994
C955
R991
C906
R910
D907
R909
R985
R971
C945
K
CONV. AMP ASSY
(AWZ6456)
V.DEFRECTION DETECTION CIRCUIT

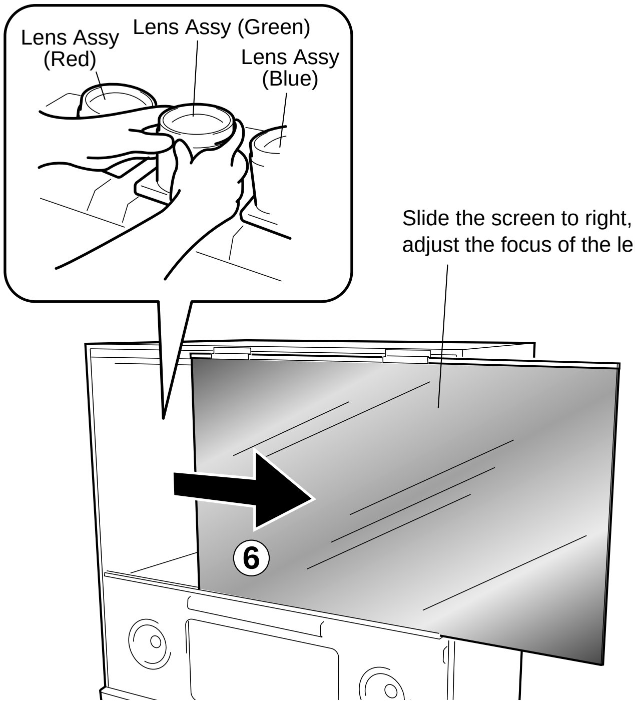
7.1.2 DISASSEMBLY

■ How to remove the screen (for adjusting Lens assemblies)


Screen Frame
①
②
①

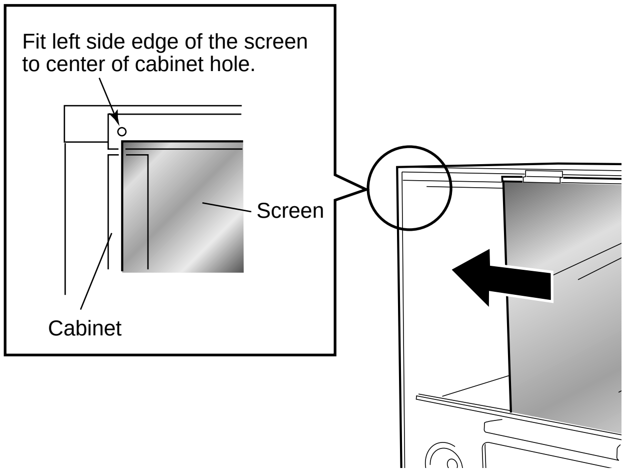

④
Loosen a screw
Remove a screw
⑤ Loosen two screws
Screen Side Fitting
Remove Upper Cabinet Metal
Upper Cabinet Metal
Screen Side Fitting
③
*
③
③
③
*
For SD-582HD5 and SD-532HD5
For SD-582HD5 and SD-532HD5

Note*:
Screen side Fitting comes off even if this screw is not removed.
However, remove this screw. When the screen is done in the slide, the screen is damaged with this screw.


Lens Assy (Red)
Lens Assy (Green)
Lens Assy (Blue)
6

Slide the screen to right, and adjust the focus of the lens.

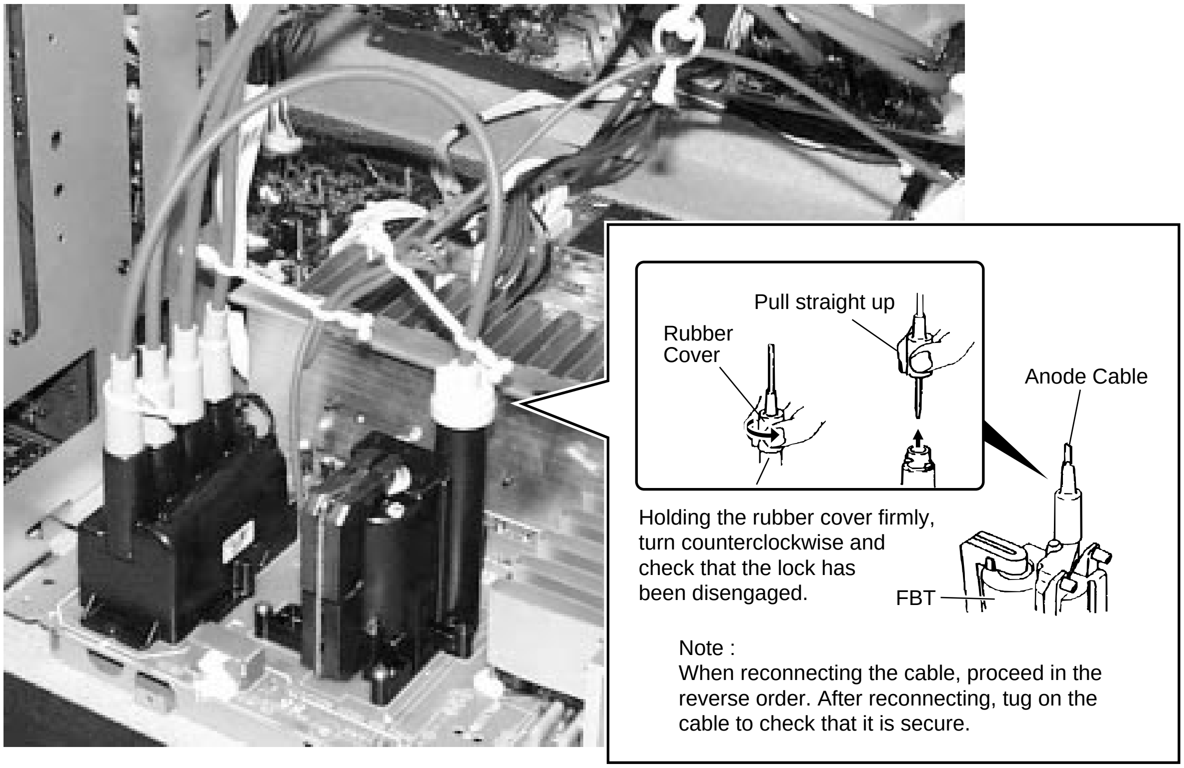
Notes:
To assemble the screen, perform the above procedures in reverse order.
After assembling it, verify that the right and left sides of the screen are positioned as shown in the figure.


Screen
Cabinet

Fit left side edge of the screen to center of cabinet hole.

■ Disconnect the Anode Cable

WARNING:
Before disconnect the anode cable, turn off the power, unplug the AC plug and let the unit discharge for more than 1 minut.

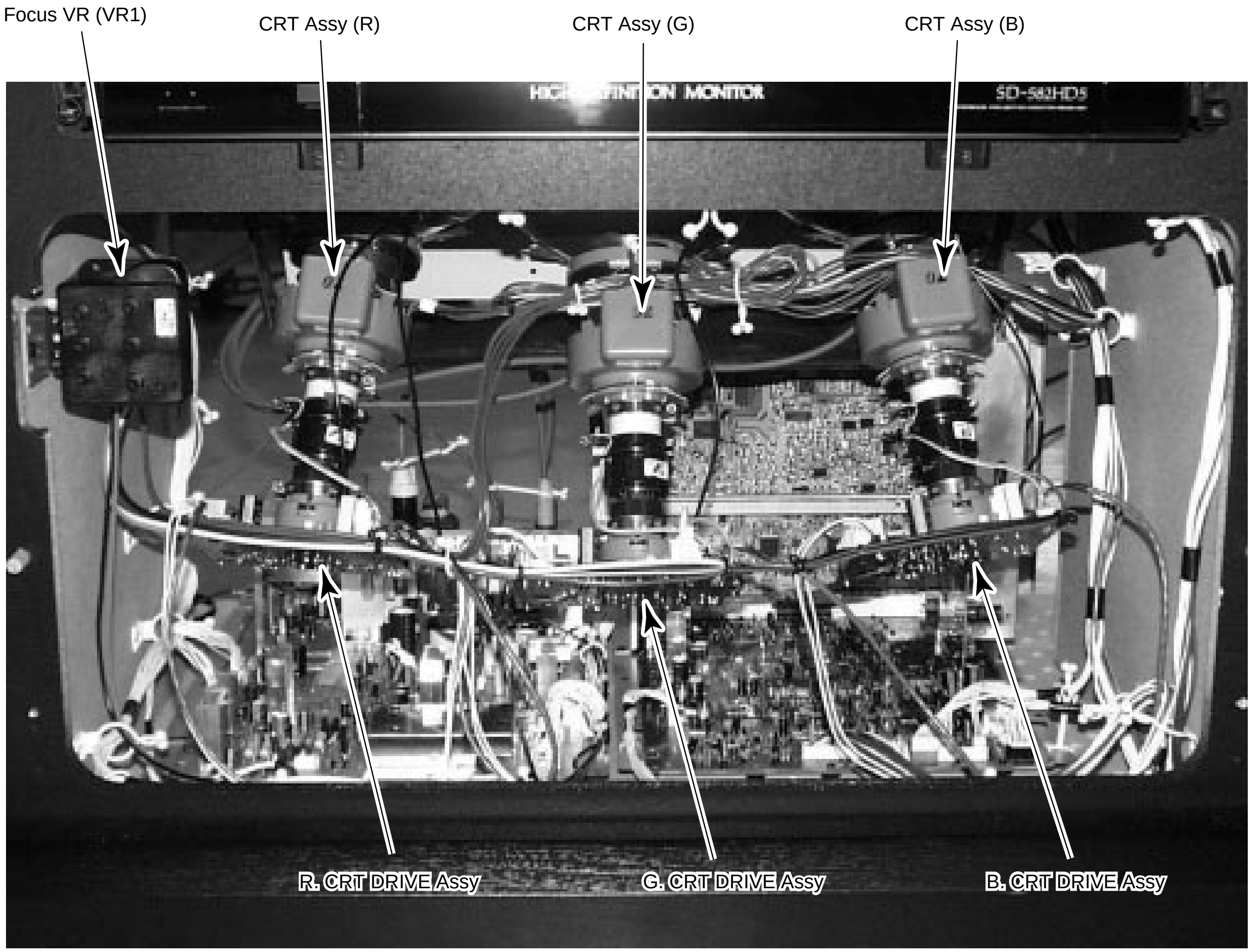

Pull straight up
Rubber Cover
Anode Cable
FBT

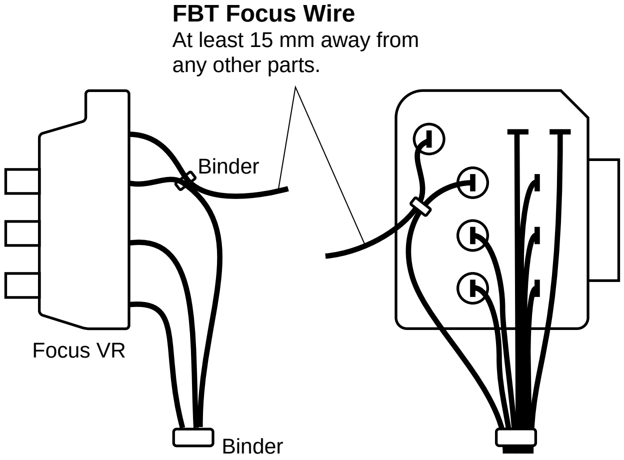
Holding the rubber cover firmly, turn counterclockwise and check that the lock has been disengaged.

Note :
When reconnecting the cable, proceed in the reverse order. After reconnecting, tug on the cable to check that it is secure.

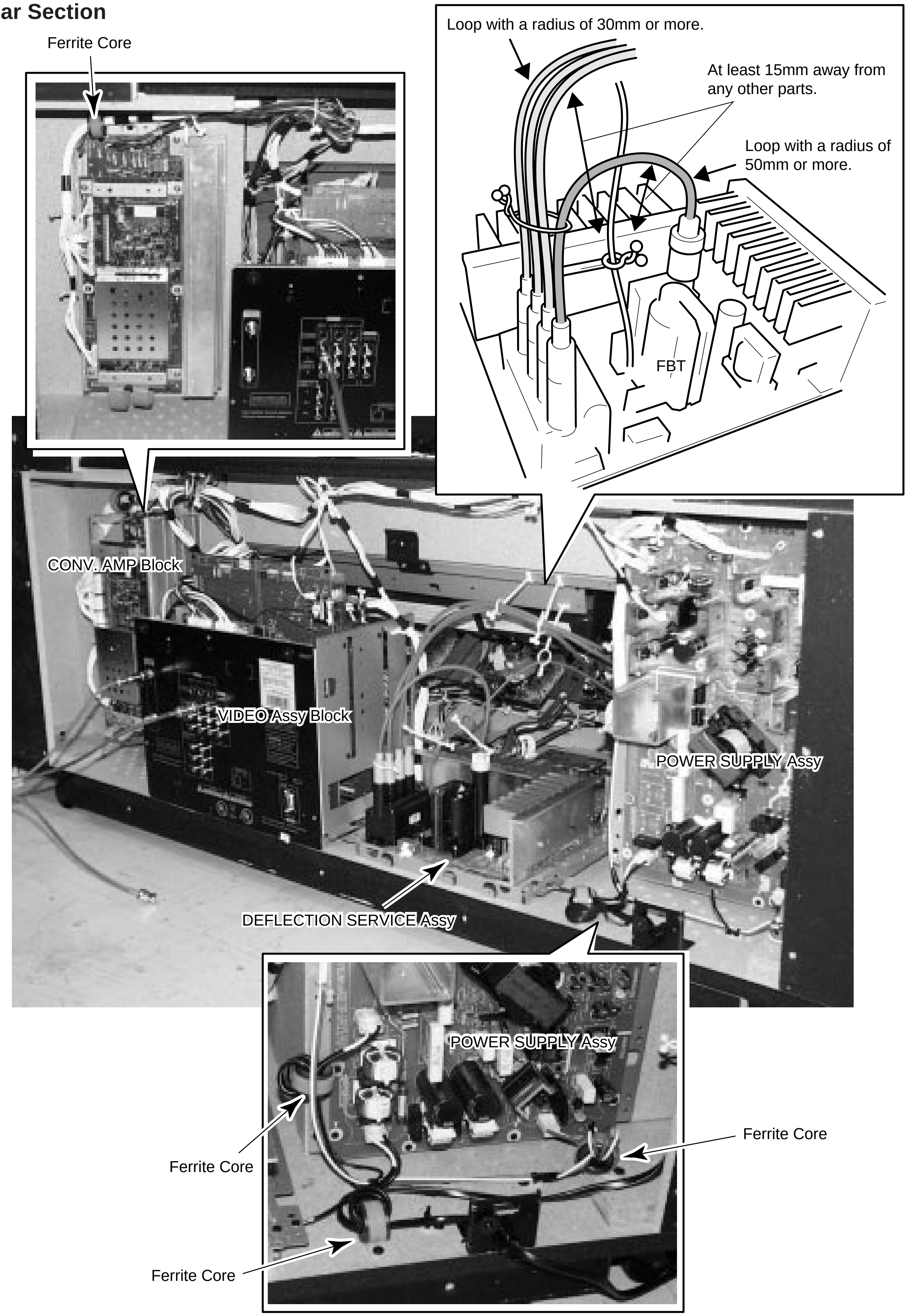
7.1.3 WIRING DIAGRAM

■ Front Section


Focus VR (VR1)
CRT Assy (R)
CRT Assy (G)
CRT Assy (B)
HIGH DEFINITION MONITOR
SD-582HD5
R. CRT DRIVE Assy
G. CRT DRIVE Assy
B. CRT DRIVE Assy


FBT Focus Wire
At least 15 mm away from
any other parts.
Binder
Focus VR
Binder

■ Rear Section


Ferrite Core
Loop with a radius of 30mm or more.
At least 15mm away from any other parts.
Loop with a radius of 50mm or more.
FBT
CONV. AMP Block
VIDEO Assy Block
POWER SUPPLY Assy
DEFLECTION SERVICE Assy
POWER SUPPLY Assy
Ferrite Core
Ferrite Core
Ferrite Core

7.2 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

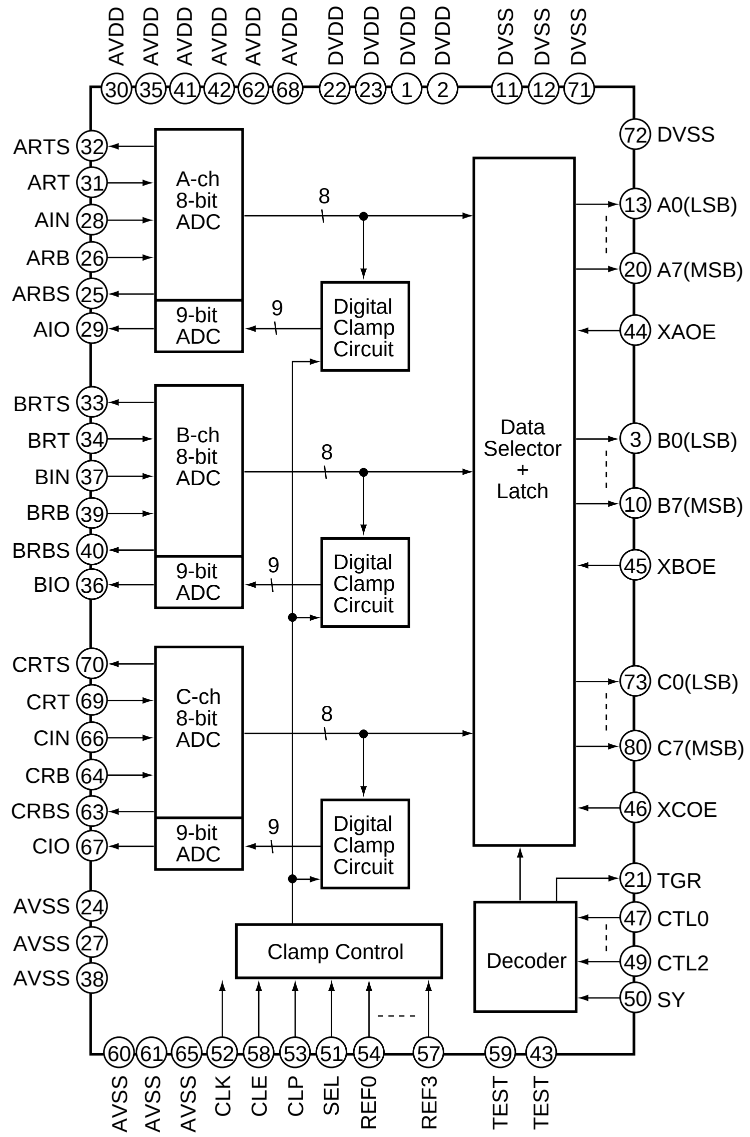
● List of IC

CXD2303AQ, MB40958PFQ, CXA3106Q, PE5066A, PE5067A, EM636327Q-8, PD3420AB, SAA4990H,
CD74HCT4046AM, SAA4955TJ, SAA4997H-K, 24LC128(I)P, 24LC08B(I)P, CM0006C1F, 24LC32A(I)P, ML6420CS-3,
CXA2094Q, CM0010AF, TK15420M, MC33167TV

■ CXD2303AQ (SUB VIDEO SERVICE ASSY : IC3203) (PRO-610HD, PRO-510HD ONLY)

• Video A/D Converter

● Block Diagram


AVDD 30
AVDD 35
AVDD 41
AVDD 42
AVDD 62
AVDD 68
DVDD 22
DVDD 23
DVDD 1
DVDD 2
DVSS 11
DVSS 12
DVSS 71
72 DVSS
ARTS 32
ART 31
AIN 28
ARB 26
ARBS 25
AIO 29
A-ch 8-bit ADC
9-bit ADC
8
9
Digital Clamp Circuit
Data Selector + Latch
13 A0(LSB)
20 A7(MSB)
44 XAOE
BRTS 33
BRT 34
BIN 37
BRB 39
BRBS 40
BIO 36
B-ch 8-bit ADC
9-bit ADC
8
9
Digital Clamp Circuit
3 B0(LSB)
10 B7(MSB)
45 XBOE
CRTS 70
CRT 69
CIN 66
CRB 64
CRBS 63
CIO 67
C-ch 8-bit ADC
9-bit ADC
8
9
Digital Clamp Circuit
73 C0(LSB)
80 C7(MSB)
46 XCOE
21 TGR
47 CTL0
49 CTL2
50 SY
Decoder
Clamp Control
AVSS 24
AVSS 27
AVSS 38
60 AVSS
61 AVSS
65 AVSS
52 CLK
58 CLE
53 CLP
51 SEL
54 REF0
57 REF3
59 TEST
43 TEST

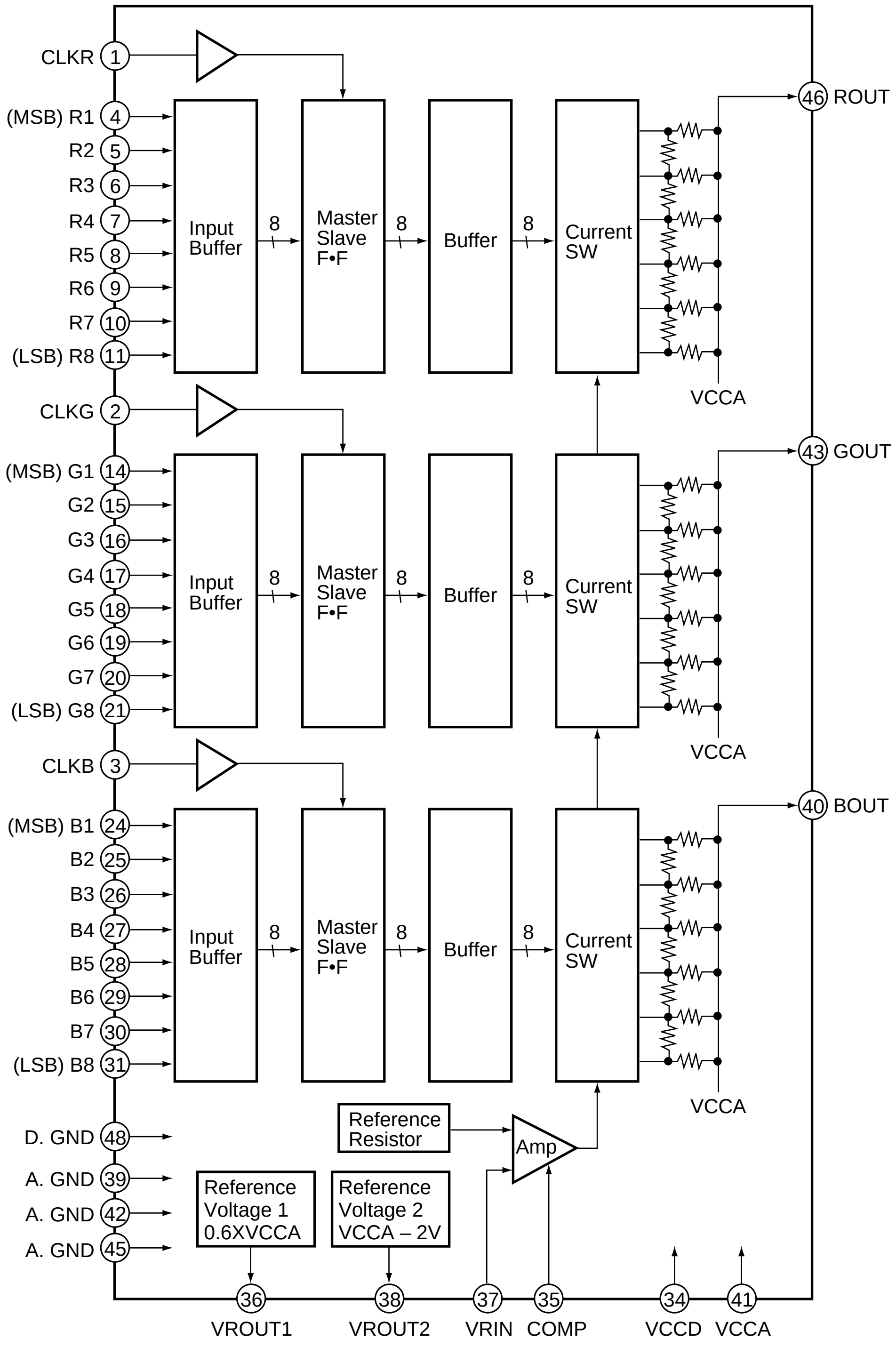
● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	DVDD	–	Digital power supply +5V or +3.3V	41	AVDD	–	Analog power supply +5V
2	DVDD	–		42	AVDD	–	
3	B0	O	Digital output (B0: LSB, B7: MSB)	43	TEST	I	Open at normal use (built-in pull-down resistor)
4	B1			44	XAOE	I	Output enable input L: output, H: High-impedance
5	B2			45	XBOE		
6	B3			46	XCOE		
7	B4			47	CTL0	I	Decides the digital output mode (built-in pull-down resistor)
8	B5			48	CTL1		
9	B6			49	CTL2		
10	B7			50	SY	I	Control the switching timing of the digital output mode (built-in pull-down resistor)
11	DVSS	–	Digital ground	51	SEL	I	Control the polarity of CLP signal L: CLP is High, H: CLP is Low (built-in pull-down resistor)
12	DVSS	–		52	CLK	I	Clock input (built-in pull-down resistor)
13	A0	O	Digital output (A0: LSB, A7: MSB)	53	CLP	I	Clamp pulse input (built-in pull-down resistor)
14	A1			54	REF0	I	Decides the reference data of the clamp circuit (built-in pull-down resistor)
15	A2			55	REF1		
16	A3			56	REF2		
17	A4			57	REF3		
18	A5			58	CLE	I	Clamp enable L: Clamp circuit is not operate , H: Clamp circuit operates (built-in pull-down resistor)
19	A6			59	TEST	I	Open at normal use (built-in pull-down resistor)
20	A7			60	AVSS	–	Analog ground
21	TGR	O	Trigger output	61	AVSS	–	
22	DVDD	–	Digital power supply +5V or +3.3V	62	AVDD	–	Analog power supply +5V
23	DVDD	–		63	CRBS	–	Generates about 0.5V to CRB pin by short-circuiting to AVSS
24	AVSS	–	Analog ground	64	CRB	–	Reference voltage (Bottom)
25	ARBS	–	Generates about 0.5V to ARB pin by short-circuiting to AVSS	65	AVSS	–	Analog ground
26	ARB	–	Reference voltage (Bottom)	66	CIN	I	Analog input
27	AVSS	–	Analog ground	67	CIO	O	Analog output (D/A converter output pin)
28	AIN	I	Analog input	68	AVDD	–	Analog power supply +5V
29	AIO	O	Analog output (D/A converter output pin)	69	CRT	–	Reference voltage (Top)
30	AVDD	–	Analog power supply +5V	70	CRTS	–	Generates about 2.5V to CRT pin by short-circuiting to AVDD
31	ART	–	Reference voltage (Top)	71	DVSS	–	Digital ground
32	ARTS	–	Generates about 2.5V to ART pin by short-circuiting to AVDD	72	DVSS	–	
33	BRTS	–	Generates about 2.5V to BRT pin by short-circuiting to AVDD	73	C0	O	Digital output (C0: LSB, C7: MSB)
34	BRT	–	Reference voltage (Top)	74	C1		
35	AVDD	–	Analog power supply +5V	75	C2		
36	BIO	O	Analog output (D/A converter output pin)	76	C3		
37	BIN	I	Analog input	77	C4		
38	AVSS	–	Analog ground	78	C5		
39	BRB	–	Reference voltage (Bottom)	79	C6		
40	BRBS	–	Generates about 0.5V to BRB pin by short-circuiting to AVSS	80	C7		

■ MB40958PFQ (SUB VIDEO SERVICE ASSY : IC3602) (PRO-610HD, PRO-510HD ONLY)

- **D/A Converter**

● Block Diagram


CLKR 1
(MSB) R1 4
R2 5
R3 6
R4 7
R5 8
R6 9
R7 10
(LSB) R8 11
CLKG 2
(MSB) G1 14
G2 15
G3 16
G4 17
G5 18
G6 19
G7 20
(LSB) G8 21
CLKB 3
(MSB) B1 24
B2 25
B3 26
B4 27
B5 28
B6 29
B7 30
(LSB) B8 31
D. GND 48
A. GND 39
A. GND 42
A. GND 45
Input Buffer
Master Slave F•F
Buffer
Current SW
8
VCCA
46 ROUT
43 GOUT
40 BOUT
Reference Resistor
Amp
Reference Voltage 1 0.6XVCCA
Reference Voltage 2 VCCA – 2V
36 VROUT1
38 VROUT2
37 VRIN
35 COMP
34 VCCD
41 VCCA

● Pin Function

No.	Pin Name	I/O	Pin Function
1	CLKR	I	R ch clock signal input
2	CLKG	I	G ch clock signal input
3	CLKB	I	B ch clock signal input
4	R1	I	R ch data signal input (R1: MSB, R8: LSB)
5	R2		
6	R3		
7	R4		
8	R5		
9	R6		
10	R7		
11	R8		
12	N.C.	–	Non connection
13	N.C.		
14	G1	I	G ch data signal input (G1: MSB, G8: LSB)
15	G2		
16	G3		
17	G4		
18	G5		
19	G6		
20	G7		
21	G8		
22	N.C.	–	Non connection
23	N.C.		
24	B1	I	B ch data signal input (B1: MSB, B8: LSB)
25	B2		
26	B3		
27	B4		
28	B5		
29	B6		
30	B7		
31	B8		
32	N.C.	–	Non connection
33	N.C.		
34	VCCD	–	Digital power supply (+5V)
35	COMP	–	Phase compensating capacitance pin Connect a 0.1µF capacitor between this pin and A.GND pin.
36	VROUT1	O	Reference voltage output 1
37	VRIN	I	Reference voltage input
38	VROUT2	O	Reference voltage output 2
39	A.GND	–	Analog ground (0V)
40	BOUT	O	B ch analog signal output
41	VCCA	–	Analog power supply (+5V)
42	A.GND	–	Analog ground (0V)
43	GOUT	O	G ch analog signal output
44	VCCA	–	Analog power supply (+5V)
45	A.GND	–	Analog ground (0V)
46	ROUT	O	R ch analog signal output
47	VCCA	–	Analog power supply (+5V)
48	D.GND	–	Digital ground (0V)

■ CXA3106Q (SUB VIDEO SERVICE ASSY : IC3201) (PRO-610HD, PRO-510HD ONLY)

• **PLL IC**

● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	IOVCC	–	Digital power supply	25	TTLGND	–	GND for TTL output
2	IOGND	–	Digital GND	26	TTLVCC	–	Power supply for TTL output
3	VCOH	I	External VCO input	27	IOGND	–	Digital GND
4	VCOL	I	External inverting VCO input	28	PECLVCC	–	Power supply for PECL output
5	VCO	I	External VCO input	29	CLK/2L	O	Inverting 1/2 clock output
6	HOLD	I	Phase comparating disable signal input	30	CLK/2H	O	1/2 clock output
7	SYNCH	I	Sync input	31	CLKL	O	Inverting clock output
8	SYNCL	I	Inverting sync input	32	CLKH	O	Clock output
9	SYNC	I	Sync input	33	DSYNCL	O	Delay sync signal output
10	SENABLE		Control signal (enable)	34	DSYNCH	O	Inverting delay sync signal output
11	SCLK		Control signal (clock)	35	VBB	–	Reference voltage of PECL
12	SDATA		Control signal (data)	36	PECLVCC	–	Power supply for PECL output
13	TLOAD	I	Programmable counter test input	37	IOGND	–	Digital GND
14	CS		Chip select	38	IOVCC	–	Digital power supply
15	SEROUT	O	Register read output	39	PLLVCC	–	Analog power supply for PLL circuit
16	DIVOUT	O	Programmable counter test output	40	PLLGND	–	Analog GND for PLL circuit
17	UNLOCK	O	Unlock signal output	41	VCOVCC	–	Analog power supply for VCO circuit
18	DVCC	–	Digital power supply	42	VCOGND	–	Analog GND for VCO circuit
19	DGND	–	Digital GND	43	VCOHGND	–	Analog GND for VCO SUB
20	CLK/2N	O	Inverting 1/2 clock outpit	44	IREF	–	For generates the charge pump current
21	CLK/2	O	1/2 clock output	45	RC2	–	External connection pin for LPF
22	CLKN	O	Inverting clock output	46	RC1	–	External connection pin for LPF
23	CLK	O	Clock output	47	IRGND	–	Analog GND for IREF
24	DSYNC	O	Delay sync signal output	48	IRVCC	–	Analog power supply for IREF

■ PE5066A (SUB VIDEO SERVICE ASSY : IC3401) (PRO-610HD, PRO-510HD ONLY)

• I/P System Controller IC

● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	GND	–	Ground	46	YP(8)	O	Digital output of sequential converting Y signal (lower bit)
2	GND	–	Ground	47	YP(7)		
3	PRP(15)	O	(upper bit) Digital output of sequential converting R-Y signal (lower bit)	48	YP(6)		
4	PRP(14)			49	YP(5)		
5	PRP(13)			50	YP(4)		
6	PRP(12)			51	YP(3)		
7	PRP(11)			52	YP(2)		
8	PRP(10)			53	YP(1)		
9	PRP(9)			54	YP(0)		
10	PRP(8)			55	HP	O	Sequential converting H. sync signal output
11	PRP(7)			56	VP	O	Sequential converting V. sync signal output
12	PRP(6)			57	HI	I	H. sync signal input
13	PRP(5)			58	VI	I	V. sync signal input
14	PRP(4)			59	GND	–	Ground
15	PRP(3)			60	GND	–	Ground
16	PRP(2)			61	VDD	–	Power supply (3.3V)
17	PRP(1)			62	RES	I	Reset signal input
18	PRP(0)			63	GND	–	Ground
19	PBP(15)	O	Digital output of sequential converting B-Y signal (upper bit)	64	FI	I	Field signal input
20	GND	–	Ground	65	RD	I	RD signal input for PE5066A
21	VDD	–	Power supply (3.3V)	66	HWR	I	HWR signal input for PE5066A
22	PBP(14)	O	Digital output of sequential converting B-Y signal (lower bit)	67	CS	I	CS signal input for PE5066A
23	PBP(13)			68	IPKILL	I	ON/OFF signal input of I/P process
24	PBP(12)			69	NC	–	Non connection
25	PBP(11)			70	FILM	O	Film detection signal output
26	PBP(10)			71	NC	–	Non connection
27	PBP(9)			72	UA(11)	I	Address signal input for PE5066A
28	PBP(8)			73	UA(10)		
29	PBP(7)			74	UA(9)		
30	PBP(6)			75	UA(8)		
31	PBP(5)			76	UA(7)		
32	PBP(4)			77	UA(6)		
33	PBP(3)			78	UA(5)		
34	PBP(2)			79	UA(4)		
35	PBP(1)			80	GND	–	Ground
36	PBP(0)			81	VDD	–	Power supply (3.3V)
37	YP(15)	O	(upper bit) Digital output of sequential converting Y signal	82	UA(3)	I	Address signal input for PE5066A
38	YP(14)			83	UA(2)		
39	YP(13)			84	UA(1)		
40	GND	–	Ground	85	UA(0)		
41	VDD	–	Power supply (3.3V)	86	UD(7)	I/O	Data input/output for PE5066A
42	YP(12)	O	Digital output of sequential converting Y signal	87	UD(6)		
43	YP(11)			88	UD(5)		
44	YP(10)			89	GND	–	Ground
45	YP(9)			90	VDD	–	Power supply (3.3V)

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
91	UD(4)	I/O	Data input/output for PE5066A	141	MDY(23)	I/O	Data input/output for external SGRAM
92	UD(3)			142	MDY(22)		
93	UD(2)			143	MDY(21)		
94	UD(1)			144	MDY(20)		
95	UD(0)			145	MDY(19)		
96	GND	–	Ground	146	MDY(18)		
97	MDC(23)	I/O	Data input/output for external SGRAM	147	MDY(17)		
98	MDC(22)			148	MDY(16)		
99	MDC(21)			149	MDY(7)		
100	VDD	–	Power supply (3.3V)	150	MDY(6)		
101	GND	–	Ground	151	MDY(5)		
102	MDC(20)	I/O	Data input/output for external SGRAM	152	MDY(4)		
103	MDC(19)			153	MDY(3)		
104	MDC(18)			154	MDY(2)		
105	MDC(17)			155	MDY(1)		
106	MDC(16)			156	MDY(0)		
107	MDC(7)			157	MA(10)	O	Address signal output for external SGRAM
108	MDC(6)			158	MA(8)		
109	MDC(5)			159	MA(0)		
110	MDC(4)			160	VDD	–	Power supply (3.3V)
111	MDC(3)			161	GND	–	Ground
112	MDC(2)			162	MA(1)	O	Address signal output for external SGRAM
113	MDC(1)			163	MA(2)		
114	MDC(0)			164	MA(3)		
115	MCLKC	O	CLK signal output for external SGRAM	165	MA(4)		
116	MCS	O	CS signal output for external SGRAM	166	MA(5)		
117	MRAS	O	RAS signal output for external SGRAM	167	MA(6)		
118	MCAS	O	CAS signal output for external SGRAM	168	MA(7)		
119	MWE	O	WE signal output for external SGRAM	169	MA(9)		
120	VDD	–	Power supply (3.3V)	170	MCLKY	O	CLK signal output for external SGRAM
121	GND	–	Ground	171	MDY(31)	I/O	Data input/output for external SGRAM
122	GND	–	Ground	172	MDY(30)		
123	MDC(31)	I/O	Data input/output for external SGRAM	173	MDY(29)		
124	MDC(30)			174	MDY(28)		
125	MDC(29)			175	MDY(27)		
126	MDC(28)			176	MDY(26)		
127	MDC(27)			177	MDY(25)		
128	MDC(26)			178	MDY(24)		
129	MDC(25)			179	GND	–	Ground
130	MDC(24)			180	GND	–	Ground
131	MDC(15)			181	VDD	–	Power supply (3.3V)
132	MDC(14)			182	MDY(15)	I/O	Data input/output for external SGRAM
133	MDC(13)			183	MDY(14)		
134	MDC(12)			184	MDY(13)		
135	MDC(11)			185	MDY(12)		
136	MDC(10)			186	MDY(11)		
137	MDC(9)			187	MDY(10)		
138	MDC(8)			188	MDY(9)		
139	GND	–	Ground	189	MDY(8)		
140	VDD	–	Power supply (3.3V)	190	NC	–	Non connection

No.	Pin Name	I/O	Pin Function
191	NC	–	Non connection
192	NC		
193	NC		
194	NC		
195	NC		
196	NC		
197	NC		
198	NC		
199	NC		
200	GND	–	Ground
201	VDD	–	Power supply (3.3V)
202	NC	–	Non connection
203	NC		
204	NC		
205	NC		
206	NC		
207	NC		
208	NC		
209	NC		
210	NC		
211	NC		
212	YI(7)	I	(upper bit) Digital input of Y signal
213	YI(6)		
214	YI(5)		
215	YI(4)		
216	YI(3)	I	Digital input of Y signal (lower bit)
217	YI(2)		
218	YI(1)		
219	YI(0)		
220	VDD	–	Power supply (3.3V)
221	GND	–	Ground
222	PBI(7)	I	(upper bit) Digital input of B-Y signal (lower bit)
223	PBI(6)		
224	PBI(5)		
225	PBI(4)		
226	PBI(3)		
227	PBI(2)		
228	PBI(1)		
229	PBI(0)		
230	PRI(7)	I	(upper bit) Digital input of R-Y signal (lower bit)
231	PRI(6)		
232	PRI(5)		
233	PRI(4)		
234	PRI(3)		
235	PRI(2)		
236	PRI(1)		
237	PRI(0)		
238	GND	–	Ground
239	CLK	I	System clock input
240	VDD	–	Power supply (3.3V)

■ PE5067A (SUB VIDEO SERVICE ASSY : IC3501) (PRO-610HD, PRO-510HD ONLY)

- **I/P System Controller IC**

● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	GND	–	Ground	51	DEI	I	Data enable input for external DIGITAL I/F
2	GND	–	Ground	52	HDI	I	H. sync signal input
3	CLK	I	System clock input	53	VDI	I	V. sync signal input
4	GND	–	Ground	54	FLDI	I	Field signal input (Not used)
5	GBI(0)	I	(lower bit) Demultiplex digital input B of G/Y signal (upper bit)	55	GND	–	Ground
6	GBI(1)			56	RES	I	Reset signal input
7	GBI(2)			57	VDD	–	Power supply (3.3V)
8	GBI(3)			58	GND	–	Ground
9	GBI(4)			59	HCLR	O	Histogram clear signal output
10	GBI(5)			60	FDET	O	ON/OFF judge signal output of I/P process
11	GBI(6)			61	VACT	O	Histogram signal output
12	GBI(7)			62	WAIT	O	WAIT signal input for PE5067A
13	BBI(0)	I	(lower bit) Demultiplex digital input B of B/PB signal	63	NC	–	Non connection
14	BBI(1)			64	HWR	I	HWR signal input for PE5067A
15	BBI(2)			65	RD	I	RD signal input for PE5067A
16	BBI(3)			66	CS	I	CS signal input for PE5067A
17	BBI(4)			67	EMG_IP	I	Compulsory hardware through function
18	BBI(5)			68	UA(11)	I	Address signal input for PE5067A
19	VDD	–	Power supply (3.3V)	69	UA(10)		
20	GND	–	Ground	70	UA(9)		
21	BBI(6)	I	Demultiplex digital input B of B/PB signal (upper bit)	71	UA(8)		
22	BBI(7)			72	UA(7)		
23	RAI(0)	I	(lower bit) Demultiplex digital input A of R/PR signal (upper bit)	73	UA(6)		
24	RAI(1)			74	UA(5)		
25	RAI(2)			75	GND	–	Ground
26	RAI(3)			76	GND	–	
27	RAI(4)			77	VDD	–	Power supply (3.3V)
28	RAI(5)			78	VDD	–	
29	RAI(6)			79	UA(4)	I	Address signal input for PE5067A
30	RAI(7)			80	UA(3)		
31	GAI(0)	I	(lower bit) Demultiplex digital input A of G/Y signal	81	UA(2)		
32	GAI(1)			82	UA(1)		
33	GAI(2)			83	UA(0)		
34	GAI(3)			84	GND	–	Ground
35	GAI(4)			85	UD(7)	I/O	Data input/output for PE5067A
36	GAI(5)			86	UD(6)		
37	VDD	–	Power supply (3.3V)	87	UD(5)		
38	VDD	–		88	UD(4)		
39	GND	–	Ground	89	GND	–	Ground
40	GND	–		90	UD(3)	I/O	Data input/output for PE5067A
41	GAI(6)	I	Demultiplex digital input A of G/Y signal (upper bit)	91	UD(2)		
42	GAI(7)			92	UD(1)		
43	BAI(0)	I	(lower bit) Demultiplex digital input A of B/PB signal (upper bit)	93	UD(0)		
44	BAI(1)			94	FLDO	O	System output of field signal
45	BAI(2)			95	GND	–	Ground
46	BAI(3)			96	GND	–	
47	BAI(4)			97	VDO	O	System output of sequential converting V. sync signal
48	BAI(5)			98	HDO	O	System output of sequential converting H. sync signal
49	BAI(6)			99	DEO	O	Sequential converting data enable output
50	BAI(7)			100	BAO(7)	O	Demultiplex digital outut A of B/PB signal (upper bit)

No.	Pin Name	I/O	Pin Function
101	BAO(6)	O	Demultiplex digital outut A of B/PB signal
102	BAO(5)		
103	BAO(4)		
104	VDD	–	Power supply (3.3V)
105	GND	–	Ground
106	BAO(3)	O	Demultiplex digital outut A of B/PB signal (lower bit)
107	BAO(2)		
108	BAO(1)		
109	BAO(0)		
110	GAO(7)	O	(upper bit) Demultiplex digital outut A of G/Y signal
111	GAO(6)		
112	GAO(5)		
113	VDD	–	Power supply (3.3V)
114	VDD	–	
115	GND	–	Ground
116	GND	–	
117	GAO(4)	O	Demultiplex digital outut A of G/Y signal (lower bit)
118	GAO(3)		
119	GAO(2)		
120	GAO(1)		
121	GAO(0)		
122	RAO(7)	O	(upper bit) Demultiplex digital outut A of R/PR signal
123	RAO(6)		
124	VDD	–	Power supply (3.3V)
125	GND	–	Ground
126	RAO(5)	O	Demultiplex digital outut A of R/PR signal (lower bit)
127	RAO(4)		
128	RAO(3)		
129	RAO(2)		
130	RAO(1)		
131	RAO(0)		
132	VCLK	O	Sync clock output of digital output
133	GND	–	Ground
134	GND	–	
135	BBO(7)	O	(upper bit) Demultiplex digital outut B of B/PB signal (lower bit)
136	BBO(6)		
137	BBO(5)		
138	BBO(4)		
139	BBO(3)		
140	BBO(2)		
141	BBO(1)		
142	BBO(0)		
143	GND	–	Ground
144	GBO(7)	O	(upper bit) Demultiplex digital outut B of G/Y signal
145	GBO(6)		
146	GBO(5)		
147	GBO(4)		
148	GBO(3)		
149	GBO(2)		
150	GBO(1)		
151	VDD	–	Power supply (3.3V)
152	VDD	–	Power supply (3.3V)
153	GND	–	Ground
154	GND	–	
155	GBO(0)	O	Demultiplex digital outut B of G/Y signal (lower bit)
156	RBO(7)	O	(upper bit) Demultiplex digital outut B of R/PR signal
157	RBO(6)		
158	RBO(5)		
159	RBO(4)		
160	RBO(3)		
161	RBO(2)		
162	VDD	–	Power supply (3.3V)
163	GND	–	Ground
164	RBO(1)	O	Demultiplex digital outut B of R/PR signal (lower bit)
165	RBO(0)		
166	FI	O	Field signal output
167	VI	O	V. sync signal output
168	HI	O	H. sync signal output
169	VP	I	Sequential converting V. sync signal input
170	HP	I	Sequential converting H. sync signal input
171	VDD	–	Power supply (3.3V)
172	GND	–	Ground
173	PRP(0)	I	(lower bit) Digital input of R-Y signal after sequential converted (upper bit)
174	PRP(1)		
175	PRP(2)		
176	PRP(3)		
177	PRP(4)		
178	PRP(5)		
179	PRP(6)		
180	PRP(7)		
181	PRP(8)		
182	PRP(9)		
183	PRP(10)		
184	PRP(11)		
185	PRP(12)		
186	PRP(13)		
187	PRP(14)		
188	PRP(15)		
189	VDD	–	Power supply (3.3V)
190	VDD	–	
191	GND	–	Ground
192	GND	–	
193	PBP(0)	I	(lower bit) Digital input of B-Y signal after sequential converted
194	PBP(1)		
195	PBP(2)		
196	PBP(3)		
197	PBP(4)		
198	PBP(5)		
199	PBP(6)		
200	PBP(7)		
201	PBP(8)		
202	PBP(9)		

No.	Pin Name	I/O	Pin Function
203	PBP(10)	I	Digital input of B-Y signal after sequential converted
204	PBP(11)		
205	PBP(12)		
206	PBP(13)		
207	PBP(14)		
208	PBP(15)		(upper bit)
209	VDD	–	Power supply (3.3V)
210	GND	–	Ground
211	YP(0)	I	(lower bit) Digital input of sequential converting Y signal
212	YP(1)		
213	YP(2)		
214	YP(3)		
215	YP(4)		
216	YP(5)		
217	YP(6)		
218	YP(7)		
219	YP(8)		
220	YP(9)		
221	YP(10)		
222	YP(11)		
223	YP(12)		
224	YP(13)		
225	YP(14)		
226	YP(15)		(upper bit)
227	GND	–	Ground
228	GND	–	
229	VDD	–	Power supply (3.3V)
230	VDD	–	
231	PRI(0)	O	(lower bit) Digital output of R-Y signal
232	PRI(1)		
233	PRI(2)		
234	PRI(3)		
235	PRI(4)		
236	PRI(5)		
237	PRI(6)		
238	PRI(7)		(upper bit)
239	PBI(0)	O	(lower bit) Digital output of B-Y signal
240	PBI(1)		
241	PBI(2)		
242	PBI(3)		
243	PBI(4)		
244	PBI(5)		
245	PBI(6)		
246	PBI(7)		(upper bit)
247	GND	–	Ground
248	GND	–	
249	YI(0)	O	(lower bit) Digital output of Y signal
250	YI(1)		
251	YI(2)		
252	YI(3)		
253	YI(4)		
254	YI(5)	O	Digital output of Y signal
255	YI(6)		
256	YI(7)		(upper bit)
257	NC	–	Non connection
258	NC		
259	NC		
260	NC		
261	NC		
262	NC		
263	NC		
264	NC		
265	VDD	–	Power supply (3.3V)
266	VDD	–	
267	GND	–	Ground
268	GND	–	
269	NC	–	Non connection
270	NC		
271	NC		
272	NC		
273	NC		
274	NC		
275	NC		
276	NC		
277	GND	–	Ground
278	CLP1	O	Programmable CLP output
279	CLP2		
280	HBLK1	O	Programmable HBLK output
281	HBLK2		
282	VBLK1	O	Programmable VBLK output
283	VBLK2		
284	FLD2	O	Programmable field signal output
285	GND	–	Ground
286	GND	–	
287	NC	–	Non connection
288	NC		
289	NC		
290	NC		
291	NC		
292	NC		
293	NC		
294	SGLB	I	SGLB signal input for PE5067A
295	RBI(0)	I	(lower bit) Demultiplex digital input B of R/PR signal
296	RBI(1)		
297	RBI(2)		
298	RBI(3)		
299	RBI(4)		
300	RBI(5)		
301	RBI(6)		
302	RBI(7)		(upper bit)
303	VDD	–	Power supply (3.3V)
304	VDD	–	

■ EM636327Q-8 (SUB VIDEO SERVICE ASSY : IC3601, IC3604) (PRO-610HD, PRO-510HD ONLY)

- **16M SGRAM**

● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	DQ3	I/O	Data input/output	51	A9	I	Address input
2	VDDQ	–	DQ power supply	52	NC	–	Non connection
3	DQ4	I/O	Data input/output	53	DSF	I	Define special function signal input
4	DQ5			54	CKE	I	Clock enable input
5	VSSQ	–	DQ ground	55	CLK	I	Clock input
6	DQ6	I/O	Data input/output	56	DQM1	I	Data input/output mask input
7	DQ7			57	DQM3		
8	VDDQ	–	DQ power supply	58	NC	–	Non connection
9	DQ16	I/O	Data input/output	59	VDDQ	–	DQ power supply
10	DQ17			60	DQ8	I/O	Data input/output
11	VSSQ	–	DQ ground	61	DQ9		
12	DQ18	I/O	Data input/output	62	VSSQ	–	DQ ground
13	DQ19			63	DQ10	I/O	Data input/output
14	VDDQ	–	DQ power supply	64	DQ11		
15	VDD	–	Power supply	65	VDD	–	Power supply
16	VSS	–	Ground	66	VSS	–	Ground
17	DQ20	I/O	Data input/output	67	VDDQ	–	DQ power supply
18	DQ21			68	DQ12	I/O	Data input/output
19	VSSQ	–	DQ ground	69	DQ13		
20	DQ22	I/O	Data input/output	70	VSSQ	–	DQ ground
21	DQ23			71	DQ14	I/O	Data input/output
22	VDDQ	–	DQ power supply	72	DQ15		
23	DQM0	I	Data input/output mask input	73	VDDQ	–	DQ power supply
24	DQM2			74	DQ24	I/O	Data input/output
25	WE#	I	Write enable signal input	75	DQ25		
26	CAS#	I	Column address strobe signal input	76	VSSQ	–	DQ ground
27	RAS#	I	Row address strobe signal input	77	DQ26	I/O	Data input/output
28	CS#	I	Chip select input	78	DQ27		
29	BS	I	Bank select input	79	VDDQ	–	DQ power supply
30	A8	I	Address input	80	DQ28	I/O	Data input/output
31	A0			81	DQ29		
32	A1			82	VSSQ	–	DQ ground
33	A2			83	DQ30	I/O	Data input/output
34	A3			84	DQ31		
35	VDD	–	Power supply	85	VSS	–	Ground
36	NC	–	Non connection	86	NC	–	Non connection
37	NC			87	NC		
38	NC			88	NC		
39	NC			89	NC		
40	NC			90	NC		
41	NC			91	NC		
42	NC			92	NC		
43	NC			93	NC		
44	NC			94	NC		
45	NC			95	NC		
46	VSS	–	Ground	96	VDD	–	Power supply
47	A4	I	Address input	97	DQ0	I/O	Data input/output
48	A5			98	DQ1		
49	A6			99	VSSQ	–	DQ ground
50	A7			100	DQ2	I/O	Data input/output

■ PD3420A8 (SUB VIDEO SERVICE ASSY : IC3801) (PRO-610HD, PRO-510HD ONLY)

• I/P System micro-computer IC

● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	VCC	–	Power supply (+5V)	51	A14	I	Non connection
2	CS7	O	Non connection	52	A15	I	
3	CS6	O		53	A16	O	
4	CS5	O		54	A17	O	
5	CS4	O	Chip select of PE5066A	55	A18	O	
6	UCAS	O	Data phase control of PE5067A	56	A19	O	
7	LCAS	I/O	For microcomputer communication (Not used)	57	VSS	–	Ground
8	PB6	O		58	WAIT	I	WAIT signal of PE5067A
9	PB7	I		59	BREQ	I	Non connection
10	FEW	I	For writing the flash	60	BACK	O	Compulsory hardware through of PE5067A (Not used)
11	VSS	–	Ground	61	P18 (ϕ)	I	Clock output
12	P90	O	Error signal for communicating with main unit microcomputer	62	STBY	I	––
13	TxD1	O	For writing the flash	63	RES	I	Hardware reset of I/P microcomputer
14	RxD0	I	Data for communicating with main unit microcomputer	64	NMI	I	––
15	RxD1	I	For writing the flash	65	VSS	–	Ground
16	SCK0	I	Clock for communicating with main unit microcomputer	66	EXTAL	I	Connect a crystal oscillator
17	P95	O	Busy for communicating with main unit microcomputer	67	XTAL	I	
18	D0	O	For test	68	VCC	–	Power supply (+5V)
19	D1			69	AS	O	Non connection
20	D2			70	RD	O	RD for PE5066A/5067A
21	D3			71	HWR	O	HWR for PE5066A/5067A
22	VSS	–	Ground	72	LWR	O	––
23	D4	O	For test	73	MD0	I	––
24	D5			74	MD1	I	––
25	D6			75	MD2	I	––
26	D7			76	AVCC	–	Power supply (+5V)
27	D8	I/O	Data bus 8-bit	77	VREF	–	Reference voltage setting (+5V)
28	D9			78	P70	I	Non connection
29	D10			79	P71	I	
30	D11			80	P72	I	
31	D12			81	P73	I	
32	D13			82	P74	I	
33	D14			83	P75	I	
34	D15			84	P76	I	PLL unlock detection (Not used)
35	VCC	–	Power supply (+5V)	85	P77	I	Obtain the external film information (Not used)
36	A0	O	Address bus 12-bit	86	AVSS	–	Ground
37	A1			87	IRQ0	I	Obtain the film information
38	A2			88	IRQ1	I	Obtain the histogram
39	A3			89	IRQ2	I	Vertical sync input
40	A4			90	IRQ3	O	Chip select of PE5067A
41	A5			91	CS0	I	Field judgement
42	A6			92	VSS	–	Ground
43	A7			93	PA0	I	System frequency detection (Not used)
44	VSS	–	Ground	94	PA1	I	Horizontal sync input
45	A8	O	Address bus 12-bit	95	PA2	O	––
46	A9			96	PA3	O	––
47	A10			97	PA4	O	For test
48	A11			98	PA5	O	
49	A12	I	Non connection	99	PA6	O	IP process (PE5066A) stop control
50	A13	I	Non connection	100	PA7	O	IP system reset

■ SAA4990H (SUB VIDEO ASSY : IC3401) (SD-582HD5, SD-532HD5 ONLY)

• Progressive scan-Zoom and Noise Reduction IC (PROZONIC)

● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	TEST1/AP	I	Action pin for testing, to be connected to Vss.	41	HD	I	Horizontal reference signal
2	TEST2/SP	I	Shift pin for testing, to be connected to Vss.	42	YUVD8	O	UV bit 0
3	RE1	O	Read enable to FM1	43	YUVD9	O	UV bit 1
4	VSS1	–	Ground 1	44	YUVD10	O	UV bit 2
5	VDD1	–	Supply voltage 1	45	VDD5	–	Supply voltage 5
6	YUVC7	O	Y bit 7 to FM2	46	VSS5	–	Ground 5
7	YUVC6	O	Y bit 6 to FM2	47	YUVD11	O	UV bit 3
8	YUVC5	O	Y bit 5 to FM2	48	YUVD0	O	Y bit 0
9	YUVC4	O	Y bit 4 to FM2	49	YUVD1	O	Y bit 1
10	YUVC3	O	Y bit 3 to FM2	50	YUVD2	O	Y bit 2
11	VSS2	–	Ground 2	51	VDD6	–	Supply voltage 6
12	VDD2	–	Supply voltage 2	52	VSS6	–	Ground 6
13	YUVC2	O	Y bit 2 to FM2	53	YUVD3	O	Y bit 3
14	YUVC1	O	Y bit 1 to FM2	54	YUVD4	O	Y bit 4
15	YUVC0	O	Y bit 0 to FM2	55	YUVD5	O	Y bit 5
16	YUVC11	O	UV bit 3 to FM2	56	YUVD6	O	Y bit 6
17	YUVC10	O	UV bit 2 to FM2	57	YUVD7	O	Y bit 7
18	YUVC9	O	UV bit 1 to FM2	58	VDD7	–	Supply voltage 7
19	YUVC8	O	UV bit 0 to FM2	59	VSS7	–	Ground 7
20	CK	I	Master clock, nominal 27 or 32 MHz	60	SNRST	I	Field frequent reset from microcomputer; reset for SNERT interface
21	VSS3	–	Ground 3	61	SNDA	I/O	Data for SNERT interface
22	VDD3	–	Supply voltage 3	62	SNCL	I	Clock for SNERT interface
23	WE2	O	Write enable to FM2	63	AUX	O	Spare output from line-sequencer
24	RE2	O	Read enable to FM2	64	HO	O	Output hold to e.g. LC display
25	YUVB8	I	UV bit 0 from FM2	65	N.C.	–	Non connection
26	YUVB9	I	UV bit 1 from FM2	66	N.C.	–	Non connection
27	YUVB10	I	UV bit 2 from FM2	67	YUVA7	I	Y bit 7 from FM1
28	YUVB11	I	UV bit 3 from FM2	68	YUVA6	I	Y bit 6 from FM1
29	YUVB0	I	Y bit 0 from FM2	69	YUVA5	I	Y bit 5 from FM1
30	YUVB1	I	Y bit 1 from FM2	70	YUVA4	I	Y bit 4 from FM1
31	YUVB2	I	Y bit 2 from FM2	71	YUVA3	I	Y bit 3 from FM1
32	YUVB3	I	Y bit 3 from FM2	72	YUVA2	I	Y bit 2 from FM1
33	VDD4	–	Supply voltage 4	73	VSS8	–	Ground 8
34	VSS4	–	Ground 4	74	VDD8	–	Supply voltage 8
35	YUVB4	I	Y bit 4 from FM2	75	YUVA1	I	Y bit 1 from FM1
36	YUVB5	I	Y bit 5 from FM2	76	YUVA0	I	Y bit 0 from FM1
37	YUVB6	I	Y bit 6 from FM2	77	YUVA11	I	UV bit 3 from FM1
38	YUVB7	I	Y bit 7 from FM2	78	YUVA10	I	UV bit 2 from FM1
39	RE	I	Master read enable	79	YUVA9	I	UV bit 1 from FM1
40	VD	I	Field frequency reset, vertical display	80	YUVA8	I	UV bit 0 from FM1

CD74HCT4046AM (SUB VIDEO ASSY : IC3402) (SD-582HD5, SD-532HD5 ONLY)

- **PLL IC**

● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	PCPOUT	O	Phase comparator pulse output	9	VCOIN	I	VCO input
2	PC1OUT	O	Phase comparator 1 output	10	DEMOUT	O	Demodulator output
3	COMPIN	I	Comparator input	11	R1	-	Resistor R1 connection
4	VCOOUT	O	VCO output	12	R2	-	Resistor R2 connection
5	INH	I	Inhibit input	13	PC2OUT	O	Phase comparator 2 output
6	C1A	–	Capacitor C1 connection A	14	SIGIN	I	Signal input
7	C1B	–	Capacitor C1 connection B	15	PC3OUT	O	Phase comparator 3 output
8	GND	–	Ground (0V)	16	VCC	-	Positive supply voltage

SAA4955TJ (SUB VIDEO ASSY : IC3405, IC3406) (SD-582HD5, SD-532HD5 Only)

- **2M9 Field Memory IC**

● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	GNDP	–	Ground for protection circuits	21	VDDP	–	+3.3V +X V supply voltage for protection circuits
2	GNDD	–	Ground for general purpose	22	VDDQ	–	+3.3V supply voltage for output circuits
3	D11	I	Data input 11	23	OE	I	Output enable
4	D10	I	Data input 10	24	RE	I	Read enable
5	D9	I	Data input 9	25	RSTR	I	Reset read
6	D8	I	Data input 8	26	SRCK	I	Serial read clock
7	D7	I	Data input 7	27	Q0	O	Data output 0
8	D6	I	Data input 6	28	Q1	O	Data output 1
9	D5	I	Data input 5	29	Q2	O	Data output 2
10	D4	I	Data input 4	30	Q3	O	Data output 3
11	D3	I	Data input 3	31	Q4	O	Data output 4
12	D2	I	Data input 2	32	Q5	O	Data output 5
13	D1	I	Data input 1	33	Q6	O	Data output 6
14	D0	I	Data input 0	34	Q7	O	Data output 7
15	SWCK	I	Serial write clock	35	Q8	O	Data output 8
16	RSTW	I	Write reset clock	36	Q9	O	Data output 9
17	WE	I	Write enable	37	Q10	O	Data output 10
18	IE	I	Input enable	38	Q11	O	Data output 11
19	VDDD	–	+3.3V supply voltage for general purpose	39	GNDQ	–	Ground for output circuits
20	VDDP	–	+3.3V +X V supply voltage for protection circuits	40	GNDP	–	Ground for protection circuits

■ SAA4977H-K (SUB VIDEO ASSY : IC3403) (SD-582HD5, SD-532HD5 ONLY)

• BESIC (A/D, D/A Memory Control IC)

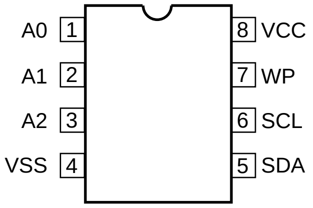
● Pin Function

No.	Pin Name	Pin Function	No.	Pin Name	Pin Function
1	SDA	I^{2}C-bus serial data (port 1.7)	41	YOD3	Y digital output bit 3
2	SCL	I^{2}C-bus serial data (port 1.6)	42	YOD4	Y digital output bit 4
3	P1.5	Port 1 data input/output signal 5	43	YOD5	Y digital output bit 5
4	P1.4	Port 1 data input/output signal 4	44	YOD6	Y digital output bit 6
5	P1.3	Port 1 data input/output signal 3	45	YOD7	Y digital output bit 7 (MSB)
6	P1.2	Port 1 data input/output signal 2	46	VDDD3	Digital supply voltage 3 (5V)
7	P1.1	Port 1 data input/output signal 1	47	SWC	Serial write clock output
8	VDDD5	Digital supply voltage 5 (3.3V)	48	VSSD2	Digital ground 2
9	RST	Microprocessor reset input	49	TRSTN	Test reset, Low active
10	SNRST	SNERT restart (port 1.0)	50	VSSD2	Digital ground 3
11	VDDD6	Digital supply voltage 6 (3.3V)	51	YID7	Y digital input bit 7 (MSB)
12	SNDA	SNERT data	52	YID6	Y digital input bit 6
13	SNCL	SNERT clock	53	YID5	Y digital input bit 5
14	VSSD4	Digital ground 4	54	YID4	Y digital input bit 4
15	TMS	Test mode select	55	YID3	Y digital input bit 3
16	VSSD1	Digital ground 1	56	YID2	Y digital input bit 2
17	SEL_CLK	Select acquisition clock input; internal PLL if High, external clock if Low	57	YID1	Y digital input bit 1
18	VDDD1	Digital supply voltage 1 (5V)	58	YID0	Y digital input bit 0
19	VDDD2	Digital supply voltage 2 (5V)	59	UVID7	U digital input bit 1
20	VA	Vertical synchronization input, acquisition part	60	UVID6	U digital input bit 0
21	VSSA1	Analog ground 1	61	UVID5	V digital input bit 1
22	HA	Analog/Digital horizontal reference input	62	UVID4	V digital input bit 0
23	VDDA1	Analog supply voltage 1 (5V)	63	RE	Read enable signal output, memory 1
24	RSTW	Reset write signal output, memory 1	64	IE2	Input enable signal output, memory 2
25	VDDA2	Analog supply voltage 2 (5V)	65	VSSIO	I/O ground
26	Y_IN	Y analog input	66	BLND	Horizontal blanking signal output, display part
27	VSSA2	Analog ground 2	67	VDDIO	I/O supply voltage (5V)
28	U_IN	U analog input	68	HRD	Horizontal reference signal output, deflection part
29	VDDA3	Analog supply voltage 3 (5V)	69	VDDD4	Digital supply voltage 4 (3.3V)
30	V_IN	V analog input	70	LLD	Display clock input
31	VSSA3	Analog ground 3	71	HDFL	Horizontal sync signal output, deflection part
32	WE	Write enable signal output, memory 1	72	VDFL	Vertical sync signal output, deflection part
33	LLA	Acquisition clock input	73	VSSA4	Analog ground 4
34	UVOD4	V digital output bit 0	74	V_OUT	V analog output
35	UVOD5	V digital output bit 1	75	VDDA4	Analog supply voltage 4 (3.3V)
36	UVOD6	U digital output bit 0	76	U_OUT	U analog output
37	UVOD7	U digital output bit 1	77	VSSA5	Analog ground 5
38	YOD0	Y digital output bit 0	78	VSSA6	Analog ground 6
39	YOD1	Y digital output bit 1	79	Y_OUT	Y analog output
40	YOD2	Y digital output bit 2	80	VDDA5	Analog supply voltage 5 (3.3V)

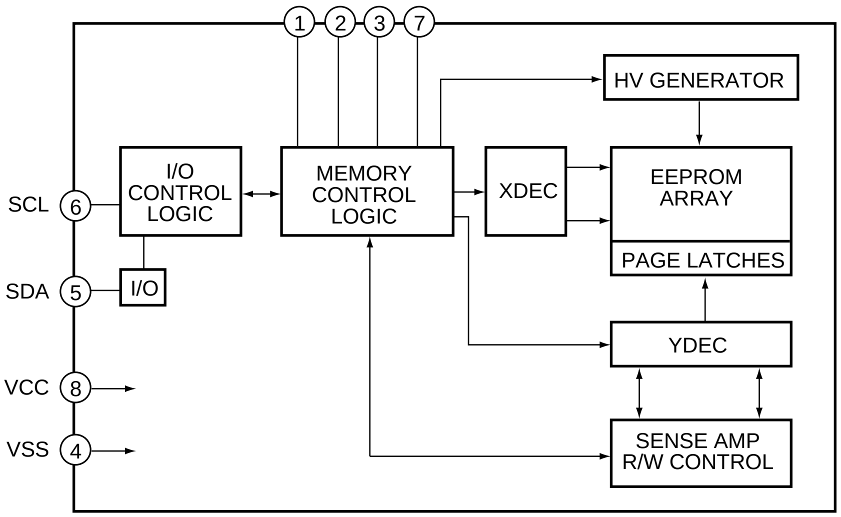
■ 24LC128(I)P (DIGITAL CONV. ASSY : IC1410)

- 128Kbit CMOS Serial EEPROM

● Pin Assignment (Top view)


A0 1
A1 2
A2 3
VSS 4
8 VCC
7 WP
6 SCL
5 SDA

● Block Diagram


A0
A1
A2
WP
1
2
3
7
HV GENERATOR
SCL 6
I/O CONTROL LOGIC
MEMORY CONTROL LOGIC
XDEC
EEPROM ARRAY
PAGE LATCHES
SDA 5
I/O
YDEC
VCC 8
VSS 4
SENSE AMP R/W CONTROL

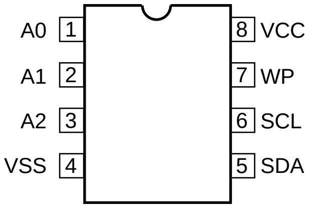
● Pin Function

No.	Pin Name	Pin Function
1	A0	User configurable chip selects
2	A1	
3	A2	
4	VSS	Ground
5	SDA	Serial Data
6	SCL	Serial clock
7	WP	Write protect input
8	VCC	+2.5V to 5.5V power supply

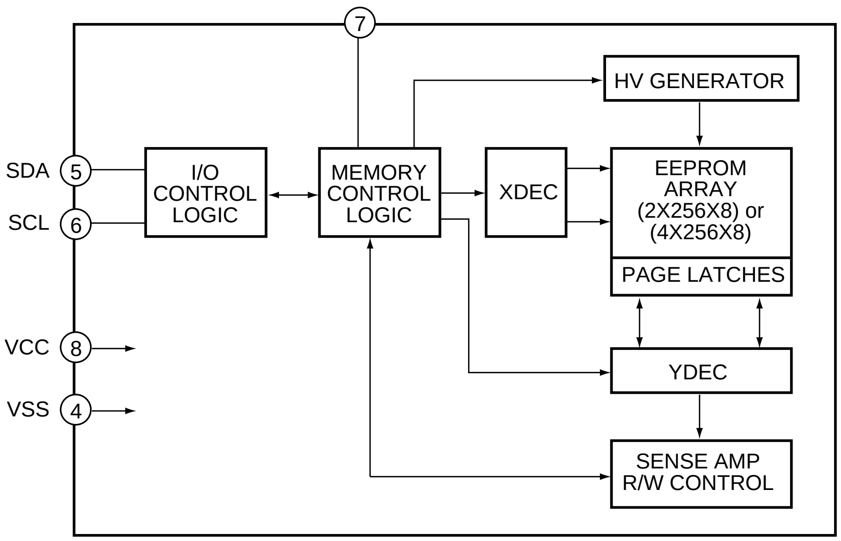
■ 24LC08B(I)P (DIGITAL CONV. ASSY : IC1656)

- 8Kbit CMOS Serial EEPROM

● Pin Assignment (Top view)


A0 1
A1 2
A2 3
VSS 4
8 VCC
7 WP
6 SCL
5 SDA

● Block Diagram


WP
7
HV GENERATOR
SDA 5
SCL 6
I/O CONTROL LOGIC
MEMORY CONTROL LOGIC
XDEC
EEPROM ARRAY (2X256X8) or (4X256X8)
PAGE LATCHES
VCC 8
VSS 4
YDEC
SENSE AMP R/W CONTROL

● Pin Function

No.	Pin Name	Pin Function
1	A0	No internal connection
2	A1	
3	A2	
4	VSS	Ground
5	SDA	Serial Address/Data I/O
6	SCL	Serial clock
7	WP	Write protect input
8	VCC	+2.5V to 5.5V power supply

■ CM0006CF (DIGITAL CONV. ASSY : IC1401)

• Digital Convergence Correction IC

● Pin Function

No.	Pin Name	I/O	Pin Function
1	TEST1	I/O	Non connection
2	XSTOP	I/O	Input of compulsory stop for accessing external EEPROM (low active, internal pull-up resistance)
3	XWC	O	Output of write control to external EEPROM (low active)
4	SDAM	I/O	Serial data input/output (open-drain) to external EEPROM for I^{2}C-bus master
5	SCLM	I/O	Clock output to external EEPROM for I^{2}C-bus master
6	DVDD	–	+5V power supply to digital circuits
7	DVSS	–	Common of digital circuits
8	XOFDET	O	Output of DSP overflow detection (low active)
9	XMUTE	I	Mute input (low active)
10	XRESET	I	Reset input (low active)
11	XBUSY	O	Busy input (low active)
12	XACKM	O	ACK monitor output (low active)
13	SDAS	I/O	Serial data input/output (open-drain) to external master for I^{2}C-bus slave
14	SCLS	I/O	Clock input from external master for I^{2}C-bus slave
15	HBLKIN	I	Horizopntal blanking pulse input (TTL level compatible)
16	PWM1	O	Pulse width modulation output-1
17	PWM2	O	Pulse width modulation output-2
18	VBLKIN	I	Vertical blanking pulse input (TTL level compatible)
19	TEST3	I/O	Non connection
20	ODDEVEN	I/O	Odd/Even input/output, Odd (High)/Even (Low) (internal pull-up resistance)
21	ROUT	O	Red test pattern output
22	GOUT	O	Green test pattern output
23	BOUT	O	Blue test pattern output
24	YMOUT	O	Contrast control output
25	YSOUT	O	OSD control output
26	HBLKOUT	I/O	Regenerated horizontal blanking pulse output (internal pull-up resistance)
27	WCLK	O	Word clock output for external DAC
28	BCLK	O	Bit clock output for external DAC
29	TEST4	I/O	Clock input for external PLL mode
30	TEST5	I/O	Output to phase comparison for external PLL mode
31	PLLVDD	–	+5V analog power supply for VCO and phase detector
32	PDOUT	O	Phase detector output (external loop filter connection to VCOIN terminal)
33	PLLVSS	–	Common of analog circuits for VCO and phase detector
34	VCOIN	I	VCO input (external loop filter connection from PDOUT terminal)
35	R1	–	External resistance for setting VCO initial transmission frequency (external resistance connection)
36	R2	–	External resistance for setting VCO gain (external resistance connection)
37	DAREF	–	Bias for dynamic focus DAC (external filter capacitor connection)
38	DAOUT	O	Dynamic focus DAC output
39	DAVDD	–	+5V analog power supply for dynamic focus DAC
40	DAVSS	–	Common of analog circuits for dynamic focus DAC
41	SHBIAS	I	Bias resistance (external resistance connection)
42	DVSS	–	Common of digital circuits

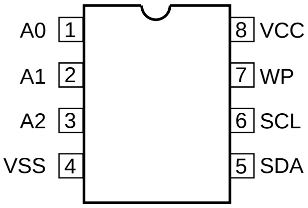
No.	Pin Name	I/O	Pin Function
43	DVDD	–	+5V power supply to digital circuits
44	BVOUT	O	Serial data output of vertical blue convergence
45	GVOUT	O	Serial data output of vertical green convergence
46	RVOUT	O	Serial data output of vertical red convergence
47	DVDD	–	+5V power supply to digital circuits
48	NC	–	Non connection
49	NC	–	Non connection
50	NC	–	Non connection
51	DVDD	–	+5V power supply to digital circuits
52	NC	–	Non connection
53	NC	–	Non connection
54	DVSS	–	Common of digital circuits
55	NC	–	Non connection
56	NC	–	Non connection
57	DVDD	–	+5V power supply to digital circuits
58	BHOUT	O	Serial data output of horizontal blue convergence
59	GHOUT	O	Serial data output of horizontal green convergence
60	RHOUT	O	Serial data output of horizontal red convergence
61	TEST6	I	Non connection
62	TEST7	I	Non connection
63	TEST8	I	Non connection
64	TEST9	I	Non connection
65	TEST10	I	Non connection
66	TEST11	I	Non connection
67	DAMODE	I	External DAC mode setting
68	DIVCNT	I	Divider setting
69	TEST14	I/O	Non connction
70	TEST15	I/O	Non connection
71	TEST16	I/O	Non connection
72	TEST17	I/O	Non connection
73	TEST18	I/O	Non connection
74	TEST19	I/O	Non connection
75	TEST20	I/O	Non connection
76	TEST21	I/O	Non connection
77	TEST22	I/O	Non connection
78	TEST23	I/O	Non connection
79	TEST24	I/O	Non connection
80	TEST25	I/O	Non connection

Note: (1) A symbol beginning with "X" indicates negative logic.
(2) The terminals from "TEST1" to "TEST25" excluding "TEST4" and "TEST5" are prohibited to use.
Finish these terminals are open terminals or pull-up to VDD.

■ 24LC32A(I)P (SIGNAL ASSY : IC2454)

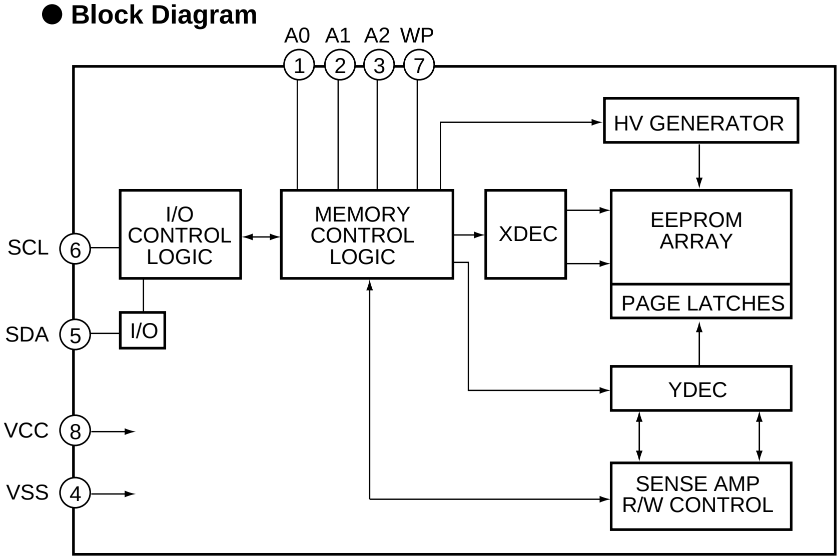
- 32Kbit CMOS Serial EEPROM

● Pin Assignment (Top view)



A0 1
A1 2
A2 3
VSS 4
8 VCC
7 WP
6 SCL
5 SDA

● Block Diagram



A0
A1
A2
WP
1
2
3
7
HV GENERATOR
SCL 6
I/O CONTROL LOGIC
MEMORY CONTROL LOGIC
XDEC
EEPROM ARRAY
PAGE LATCHES
SDA 5
I/O
YDEC
VCC 8
VSS 4
SENSE AMP R/W CONTROL

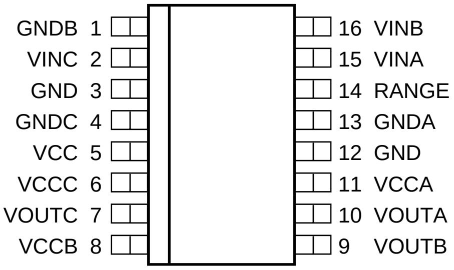
● Pin Function

No.	Pin Name	Pin Function
1	A0	User configurable chip selects
2	A1	
3	A2	
4	VSS	Ground
5	SDA	Serial Address / Data I/O
6	SCL	Serial clock
7	WP	Write protect input
8	VCC	+2.5V to 5.5V power supply

■ ML6420CS-3 (SIGNAL ASSY : IC7501)

- Video Filter IC

● Pin Assignment (Top view)



GNDB 1
VINC 2
GND 3
GNDC 4
VCC 5
VCCC 6
VOUTC 7
VCCB 8
16 VINB
15 VINA
14 RANGE
13 GNDA
12 GND
11 VCCA
10 VOUTA
9 VOUTB

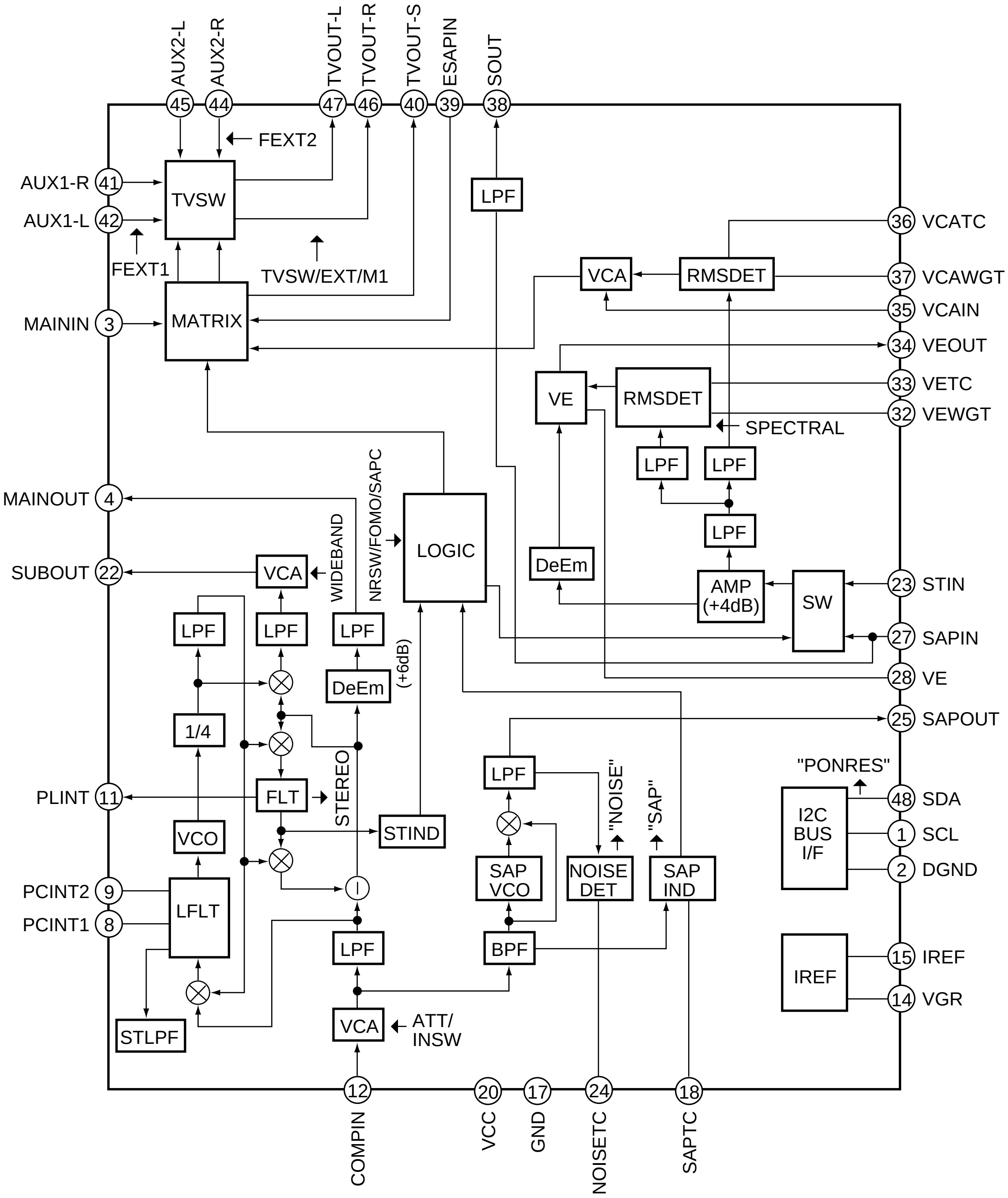
● Pin Function

No.	Pin Name	I/O	Pin Function
1	GNDB	–	Ground for filter B
2	VINC	I	Signal input to filter C
3	GND	–	Power and logic ground
4	GNDC	–	Ground for filter C
5	VCC	–	Positive supply for bias circuit
6	VCCC	–	Power supply voltage for filter C
7	VOUTC	O	Output of filter C
8	VCCB	–	Power supply voltage for filter B
9	VOUTB	O	Output of filter B
10	VOUTA	O	Output of filter A
11	VCCA	–	Power supply voltage for filter A
12	GND	–	power and logic ground
13	GNDA	–	Ground for filter A
14	RANGE	I	Input signal range select
15	VINA	I	Signal input to filter A
16	VINB	I	Signal input to filter B

■ CXA2094Q (SIGNAL ASSY : IC2701)

• US Audio Multi-channel Decoder IC

● Block Diagram


AUX2-L
AUX2-R
TVOUT-L
TVOUT-R
TVOUT-S
ESAPIN
SOUT
45
44
47
46
40
39
38
FEXT2
AUX1-R
41
AUX1-L
42
TVSW
LPF
36
VCATC
FEXT1
TVSW/EXT/M1
VCA
RMSDET
37
VCAWGT
MAININ
3
MATRIX
35
VCAIN
34
VEOUT
VE
RMSDET
33
VETC
32
VEWGT
SPECTRAL
LPF
LPF
MAINOUT
4
NRSW/FOMO/SAPC
WIDEBAND
LOGIC
LPF
SUBOUT
22
VCA
DeEm
AMP (+4dB)
SW
23
STIN
LPF
LPF
LPF
27
SAPIN
(+6dB)
DeEm
28
VE
1/4
25
SAPOUT
LPF
"PONRES"
PLINT
11
FLT
STEREO
"NOISE"
"SAP"
48
SDA
STIND
I2C BUS I/F
1
SCL
VCO
SAP VCO
NOISE DET
SAP IND
2
DGND
PCINT2
9
LFLT
PCINT1
8
LPF
BPF
15
IREF
IREF
14
VGR
STLPF
VCA
ATT/ INSW
12
20
17
24
18
COMPIN
VCC
GND
NOISETC
SAPTC

● Pin Function

No.	Pin Name	I/O	Pin Function
1	SCL	I	Serial clock input
2	DGND	–	Digital ground
3	MAININ	I	L+R signal input from MAINOUT (pin 4)
4	MAINOUT	O	L+R signal output
5	NC	–	Non connection
6	NC	–	Non connection
7	NC	–	Non connection
8	PCINT1	–	Integrated pin of the PLL loop filter of the stereo block
9	PCINT2		
10	NC	–	Non connection
11	PLINT	–	Integrated pin of the loop filter of the pilot cancel circuit
12	COMPIN	I	Audio multiple signal input
13	NC	–	Non connection
14	VGR	O	Band gap reference output
15	IREF	–	Set the reference current of the filter and VCO
16	NC	–	Non connection
17	GND	–	Analog ground
18	SAPTC	–	Set the time constant of the SAP carrier detection circuit
19	NC	–	Non connection
20	VCC	–	Power supply
21	NC	–	Non connection
22	SUBOUT	O	L-R signal output
23	STIN	I	L-R signal input from SUBOUT (pin 22)
24	NOISETC	–	Set the time constant of the NOISE detection circuit
25	SAPOUT	O	FM detector output of SAP
26	NC	–	Non connection
27	SAPIN	I	SAP signal input from SAPOUT (pin 25)
28	VE	–	Integrated pin of the variable deemphasis
29	NC	–	Non connection
30	NC	–	Non connection
31	NC	–	Non connection
32	VEWGT	–	Weight the effective value detecting circuit of variable deemphasis control
33	VETC	–	Decides the return time constant of the effective value detecting circuit of variable deemphasis
34	VEOUT	O	Variable deemphasis output
35	VCAIN	I	VCA input Input variable deemphasis output of pin 34 via the coupling capacitor.
36	VCATC	–	Decides the return time constant of the effective value detecting circuit of VCA control
37	VCAWGT	–	Weight the effective value detecting circuit of VCA control
38	SOUT	O	Simple SAP output
39	ESAPIN	I	Signal input from SOUT (pin 38)
40	TVOUT-S	O	Back output pin, it outputs the monaural or simple SAP signal
41	AUX1-R	I	R ch external input 1
42	AUX1-L	I	L ch external input 1
43	NC	–	Non connection
44	AUX2-R	I	R ch external input 2
45	AUX2-L	I	L ch external input 2
46	TVOUT-R	O	TVOUT R ch output
47	TVOUT-L	O	TVOUT L ch output
48	SDA	I/O	Serial data input/output VIH > 3.0V , VIL < 1.5V

■ CM0010AF (SIGNAL ASSY : IC7703)

• **Multi Screen Controller IC**

● Pin Function

(1) A/D Inputs for Main Video Signals

No.	Pin Name	I/O	Pin Function
62	MYIN	I	Main video Y luminance input signal. Typical input level is 1.7Vp-p.
56	MYVREFH	I/O	ADC top reference voltage for main Y signal. Maximum value (2.726V in typical) of ADC dynamic range is set by self-bias.
64	MYVREFL	I/O	ADC bottom reference voltage for main Y signal. Minimum value (0.574V in typical) of ADC dynamic range is set by self-bias.
59	MYVREF16	I/O	Clamp output signal for main Y signal. Clamp level is set to 16 in typical, and Y input is clamped at this level.
60	MYVCLAMP	I/O	For Test (Operation Amplifier output of MYVREF16 pin)
58, 63	AVDD	–	ADC analog power supply voltage for Y signal (x2)
57, 61	AGND	–	ADC analog ground for Y signal (x2)
53	MUIN	I	Sub video V chrominance input signal. Typical input level is 1.7Vp-p.
47	MVIN	I	Sub video U chrominance input signal. Typical input level is 1.7Vp-p.
45	MCVREFH	I/O	ADC top reference signal for sub UV signals.
55	MCVREFL	I/O	ADC bottom reference signal for sub UV signals.
50	MCVREF128	I/O	Clamp output signal for sub UV signals. Clamp level is set to 128 in typical, and UV inputs is clamped at this level.
51	MUCLAMP	I/O	For Test (Operation Amplifier output of MCVREF128 terminal)
49	MVCLAMP	I/O	For Test (Operation Amplifier output of MCVREF129 terminal)
48, 54	AVDD	–	ADC analog power supply voltage for UV signals (x2)
46, 52	AGND	–	ADC analog ground for UV signals (x2)

(2) A/D Inputs for Sub Video Signals

No.	Pin Name	I/O	Pin Function
82	SYIN	I	Sub video Y luminance input signal
76	SYVREFH	I/O	ADC top reference voltage for sub Y signal. Maximum value (2.726V in typical) of ADC dynamic range is set by self-bias.
84	SYVREFL	I/O	ADC bottom reference voltage for sub Y signal. Maximum value (0.574V in typical) of ADC dynamic range is set by self-bias.
79	SYVREF16	I/O	Clamp output signal for sub Y signal. Clamp level is set to 16 in typical, and Y input is clamped at this level.
80	SYCLAMP	–	For Test (Operation Amplifier output of SYVREF16 terminal).
78. 83	AVDD	–	ADC analog power supply voltage for Y signal (x2)
77, 81	AGND	–	ADC analog ground for Y signal (x2)
73	SUIN	I	Sub video U chrominance input signal. Typical input level is 2.0Vp-p.
67	SVIN	I	Sub video V chrominance input signal. Typical input level is 1.7Vp-p.
65	SCVREFH	I/O	ADC top reference signal for sub UV signals
75	SCVREFL	I/O	ADC bottom reference signal for sub UV signals
70	SCVREF128	I/O	Clamp output signal for sub UV signals. Clamp level is set to 128 in typical and UV inputs is clamped at this level.
71	SUCLAMP	I/O	For Test (Operation Amplifier output of MCVREF128 terminal)
69	SVCLAMP	I/O	For Test (Operation Amplifier output of MCVREF128 terminal)
68, 74	AVDD	–	ADC analog power supply voltage for UV signals (x2)
66, 72	AGND	–	ADC analog ground for UV signals (x2)

(3) Main PLL

No.	Pin Name	I/O	Pin Function
120	MHS	I	Main horizontal synchronous input, it inputs NTSC 15.75Hz signal.
121	MCPOUT1	O	Charge pump output, it connects to MVCOIN1 pin through external loop filter.
122	MVCOIN1	I	VCO voltage input
123	MLPFGND	–	Ground for the external loop filter
125	MPLLVDD1	–	Power supply voltage for PLL, it connects to digital power supply voltage.
124	MPLLGND1	–	Ground for PLL, it connects to digital ground.
119	MVS	I	Main vertical synchronous input
131	FB1	O	Divider output of PLL1, it outputs a divided signal in 1820 and is available if constructing the external PLL.
126	MRBIAS	I	Bias setting pin for main VCO (for test), it always sets to open.
127	MBP	O	Bias measuring pin for test
128	MBN	O	Bias measuring pin for test

(4) Sub PLL

No.	Pin Name	I/O	Pin Function
117	SHS	I	Sub horizontal synchronous input
108	SCPOUT	O	Charge pump output, it connects to SVCOIN pin through the external loop filter.
109	SVCOIN	I	VCO voltage input
110	SLPFGND	–	Ground for the external loop filter
112	SPLLVDD	–	Power voltage for PLL, it connects to digital power voltage.
111	SPLLGND	–	Ground for PLL, it connects to digital ground.
116	SVS	I	Sub vertical synchronous input
107	FB3	O	Divider output for PLL3, it outputs a divided signal in 1820 and is available if constructing the external PLL.
113	SRBIAS	I	Bias setting pin for sub VCO (for test), it always sets to open.
114	SBP	O	Bias measuring pin for test
115	SBN	O	Bias measuring pin for test

(5) Image D/A output

No.	Pin Name	I/O	Pin Function
40	YOUT	O	Luminance (Y) output signal. It is current-type output and converts to the voltage by connecting the resistance between YOUT and AGND.
38	UOUT	O	Chrominance (U) output signal. It is current-type output and converts to the voltage by connecting the resistance between YOUT and AGND.
36	VOUT	O	Chrominance (V) output signal. It is current-type output and converts to the voltage by connecting the resistance between YOUT and AGND.
22	NHSO	O	Horizontal synchronous output signal
23	NVSO	O	Vertical synchronous output signal
24	NBLANK	O	Video blanking output signal, it indicates the active period of video output signal.
44	VREF	I	Reference voltage input, it inputs 1V in typical.
43	VG	O	The capacitance pin compensating the gate voltage for current cell, it connects the 0.1µF between VG and AGND.
42	FSADJ	I/O	The resistance pin setting the maximum amplitude, it sets a full scale voltage for the DAC by connecting the external resistance.
37, 41	AVDD	–	Analog power supply voltage for DAC (x2)
35, 39	AGND	–	Analog ground for DAC (x2)

(6) DRAM

No.	Pin Name	I/O	Pin Function
144-145, 147-149, 151,152, 156,157	ADD [8:0]	O	9 bit DRAM address bus
2-4,158, 160,161, 163-165, 167,168, 170-172, 175,176	DAT [15:0]	I/O	16 bit DRAM data bus
139	NRAS	O	Row address strobe output signal
140	NCAS	O	Column address strobe output signal
141	NWE	O	Write enable output signal
142	NOE	O	Output enable signal

(7) I^{2}C Bus

No.	Pin Name	I/O	Pin Function
137	AS	I	Select pin for I^{2}C slave address. 0 selects "2C", 1 selects "2E".
135	SDA	I/O	Serial data output signal, it includes ACK signal.
136	SCL	I	Serial clock input signal

(8) Digital Input

No.	Pin Name	I/O	Pin Function
8-15	DY [7:0]	I	Digital Y inputs
25-32	DC [7:0]	I	Digital UV inputs
16	MCLK	I/O	Main 8fsc clock input/output signal
17	SCLK	I/O	Sub 8fsc clock input/output signal
18	MLOP1	O	Main ADC (Y) clamp pulse output signal, it is available for the clamp pulse of the external ADC.
19	MLOP2	O	Main ADC (UV) clamp pulse output signal, it is available for the clamp pulse of the external ADC.
20	SLOP1	O	Sub ADC (Y) clamp pulse output signal
21	SLOP2	O	Sub ADC (UV) clamp pulse output signal

(9) Test

No.	Pin Name	I/O	Pin Function
88-92	TMODE [4:0]	I	Test mode pins, it is always set to Low.
94-101	TDO [7:0]	I/O	8 bit digital output signals/digital input signals for DAC
7	SCANEN	I	Scan test enable signal, it is always set to Low or Open.
106	SYS_STOP	I	System stopping pins except PLL, it is always set to Low.
129	VCOREN	I	VCO bias ON/OFF control pins, it is always set to Low.
130	DEVSEL	I	VCO clock divider ON/OFF control pins, it is always set to Low.

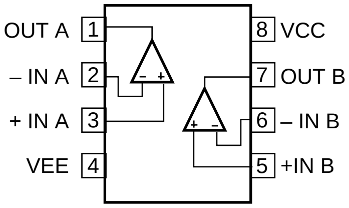
(10) Others

No.	Pin Name	I/O	Pin Function
134	NRST	I	System reset input signal
5,86,87, 105,132, 133,143, 150,159, 166,173, 174	SYSVDD	–	3.3V power supply voltage
1,6,33,34, 93,102, 103,104, 118,138, 146,153, 154,155, 162,169	SYSGND	–	Digital ground (GND)

■ TK15420M (SIGNAL ASSY : IC7102, IC7302, IC7502) (SUB VIDEO ASSY : IC3002)

- **75ohm Video Driver IC**

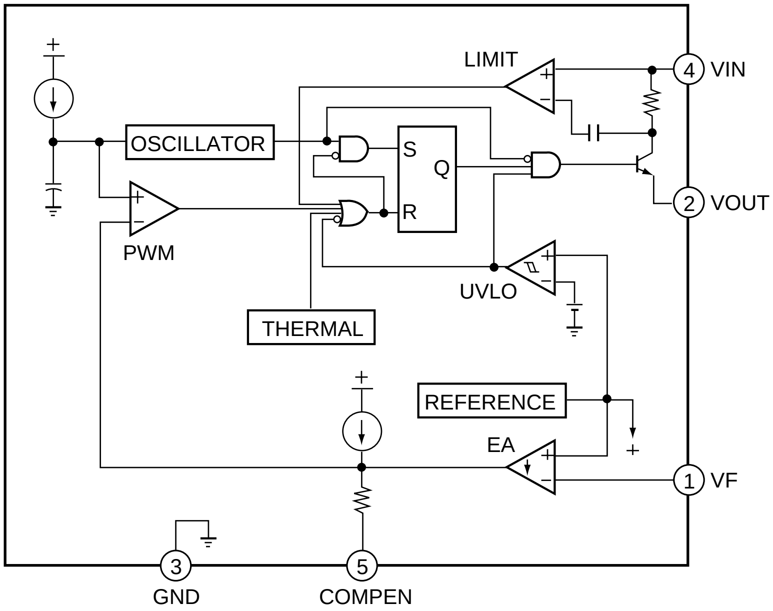
● Pin Assignment (Top view)


OUT A 1
– IN A 2
+ IN A 3
VEE 4
8 VCC
7 OUT B
6 – IN B
5 +IN B
– +
+ –

■ MC33167TV (POWER SUPPLY ASSY : IC204)

- **Switching Power Supply IC**

● Block Diagram

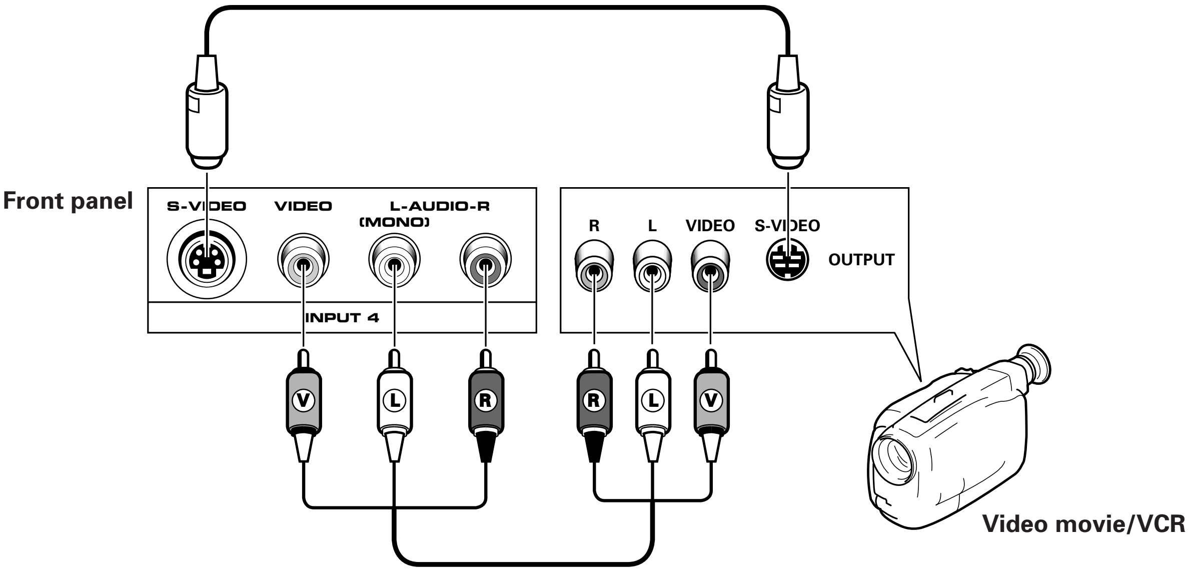

LIMIT
4 VIN
OSCILLATOR
S
Q
R
PWM
UVLO
2 VOUT
THERMAL
REFERENCE
EA
1 VF
3
GND
5
COMPEN

● Pin Function

No.	Pin Name	Pin Function
1	VF	Voltage feedback input
2	VOUT	Switch output
3	GND	Ground
4	VIN	Input voltage / VCC
5	COMPEN	Compensation/Standby

7.3 EXPLANATION

■ CONNECTING VIDEO/AUDION EQUIPMENT



INPUT jacks

There are 4 sets of inputs for VCR and DVD/LD players. Use RCA-type pin plug cords (the same as those used in Hi-Fi systems) for connections. When the audio source to be connected is monaural, connect the source to the L-(MONO) jack.

MONITOR OUTPUT jacks

These are used for connecting the monitor to a VCR for recording, or for linking it to another monitor. These jacks output the video and audio signals of the source currently selected by the INPUT SELECTOR. Connect these output jacks to your VCR's inputs. Connect the VCR's outputs to the monitor's VIDEO inputs.

S-VIDEO INPUT jacks

- Inputs S-VHS video signals or signals from a DVD/LD player that has an S-VIDEO output jack.
- When the signal input from the S-VIDEO INPUT jack is output from the MONITOR OUTPUT jack, the output signal will be a composite of Y and C.

COMPONENT VIDEO INPUT jack

Inputs three signals – Y, P_B (C_B) and P_R (C_R) – output from DVD players and the like.

Input formats in which images can be received.

	Format	Horizontal frequency	Vertical frequency
DVD player, etc.	480 i	15.734 kHz	60 Hz
Digital tuner, etc.	1080 i	33.75 kHz	60 Hz
	480 p	31.468 kHz	60 Hz

RGB INPUT jack

Inputs five signals – R, G, B, H and V – output from digital tuners and the like.

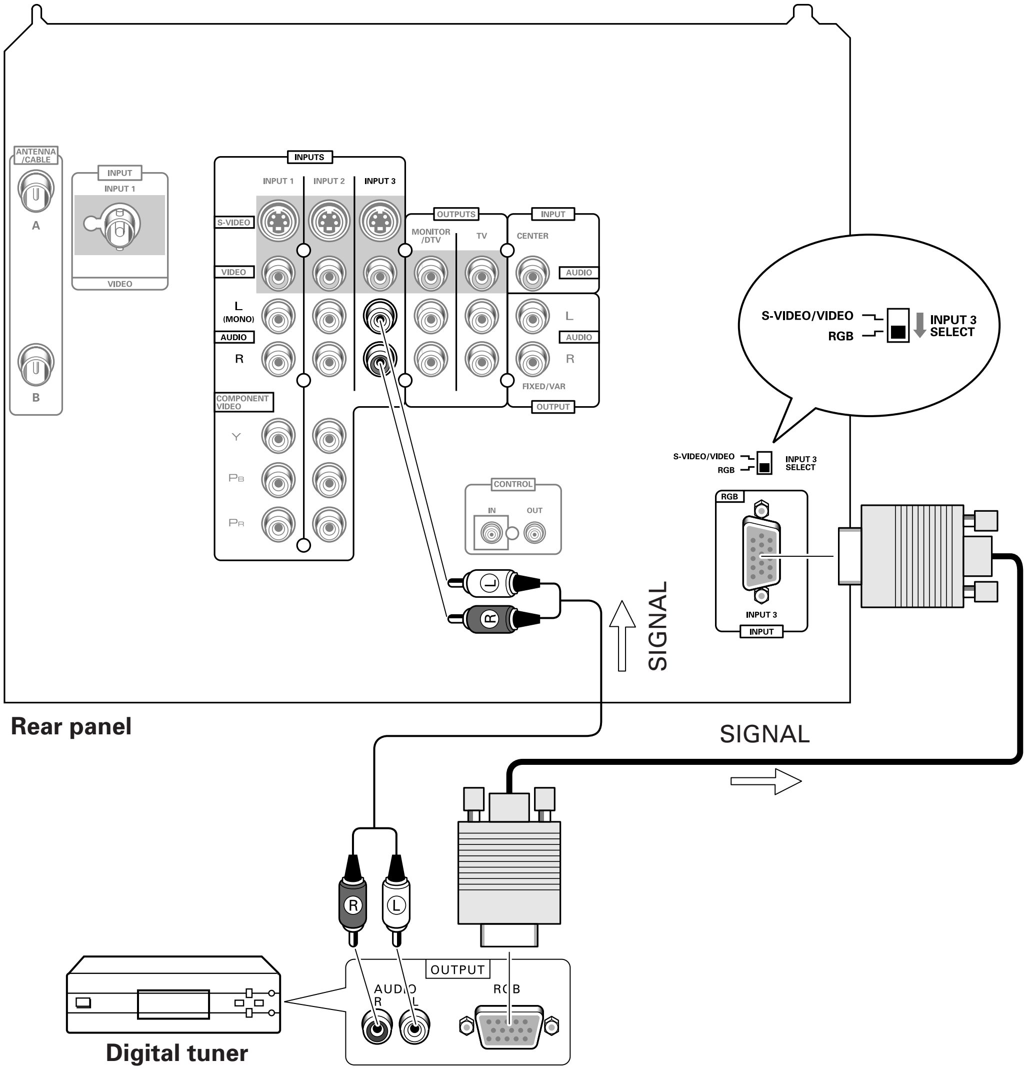
Input format in which images can be received.

	Format	Horizontal frequency	Vertical frequency
Digital tuner	1080 i	33.75 kHz	60 Hz

NOTES:

- *SPLIT screen, FREEZE screen and SEARCH screen functions cannot be used when 1080i or 480p component signals are input.*
- *Signals from MONITOR OUTPUT jacks will not be output when component signals or RGB signals are input.*
- *The RGB input jack is designed for use in connecting a digital tuner with RGB signal output, and it should accordingly never be used for connecting to a personal computer or other device.*

NOTE:
Setting the INPUT 3 SELECT switch to 'RGB' will cause all S-Video and composite images input from the INPUT 3 jack to be suppressed. Similarly, setting the INPUT 3 SELECT switch to 'S-VIDEO/VIDEO' will cause all images input from the RGB input jack to be suppressed.


ANTENNA /CABLE
A
B
INPUT
INPUT 1
VIDEO
INPUTS
INPUT 1
INPUT 2
INPUT 3
S-VIDEO
VIDEO
L (MONO)
AUDIO
R
COMPONENT VIDEO
Y
PB
PR
OUTPUTS
MONITOR /DTV
TV
INPUT
CENTER
AUDIO
L
AUDIO
R
FIXED/VAR
OUTPUT
CONTROL
IN
OUT
S-VIDEO/VIDEO
RGB
INPUT 3 SELECT
S-VIDEO/VIDEO
RGB
INPUT 3 SELECT
RGB
INPUT 3
INPUT
L
R
SIGNAL
Rear panel
SIGNAL
R
L
OUTPUT
AUDIO
R
L
RGB
Digital tuner

■ TO WATCH TV

To turn off the sound

Press the MUTING button.

When mute is turned on, a volume indicator will appear in red on the screen (and will disappear in a few seconds).
If the MUTING button is pressed while a closed caption signal is being received, CC/TEXT will be displayed.
Press MUTING again to return to the previous volume level.

Auto power off function

If the monitor is receiving no input signals in TV mode, its power will turn off (go on standby) after some time has passed.

■ PROGRAM BLOCK (V. CHIP) FUNCTION

Since laws have been passed in the United States requiring a way of blocking undesirable programming, the V-chip has become a required component in television sets. The V-chip is a computer chip which decodes signals added to broadcast signals transmitted by television broadcasters. These signals are classified by programming content (e.g., amount of violence or sexual content) and age, and viewers may specify settings which block certain types of programming.
Program blocking may be set to a specific level judged by parents to be harmful to children depending on their age or the content of the programming in question, and the V-chip makes it impossible for such children to view programs with ratings exceeding the specified level.

The V-chip uses the following rating system.

MPAA RATING

RATING		
Age-Base	G	GENERAL AUDIENCES. All ages admitted.
	PG	PARENTAL GUIDANCE SUGGESTED. Some material may not be suitable for children.
	PG-13	PARENTAL STRONGLY CAUTIONED. Some material may be inappropriate for children under 13.
	R	RESTRICTED. Under 17 requires accompanying parent or adult guardian.
	NC-17	NO ONE 17 AND UNDER ADMITTED.
	X	X Rating is an older rating that is unified with NC-17 but may be encoded on older movie's data.
	NR	NOT RATED

TV PARENTAL GUIDELINES

RATING		Description and Content Themes				
		FV	D	L	S	V
Age-Base	TV-Y	–	–	–	–	–
	TV-Y7	○	–	–	–	–
	TV-G	–	–	–	–	–
	TV-PG	–	○	○	○	○
	TV-14	–	○	○	○	○
	TV-MA	–	–	○	○	○

FV: Fantasy Violence
D: Sexually Suggestive Dialog
L: Adult Language
S: Sexual Situations
V: Violence

TV-Y All Children. This program is designed to be appropriate for all children.

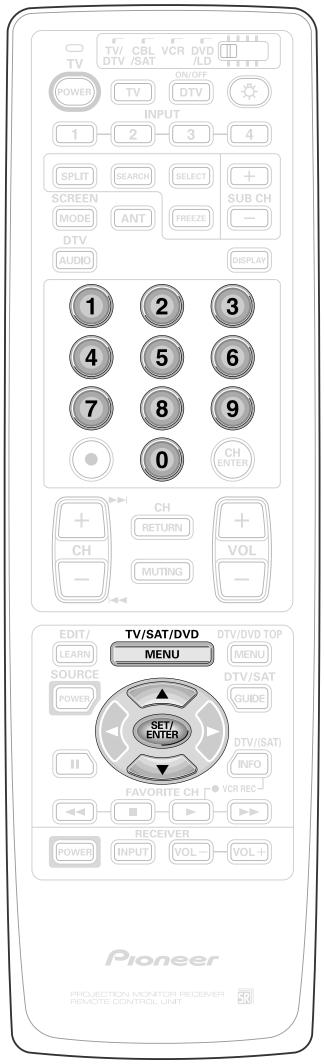
TV-Y7 Directed to Older Children. This program is designed for children age 7 and above.
Note: For those programs where fantasy violence may be more intense or more combative than other programs in this category, such programs will be designated TV-Y7-FV.

TV-G General Audience. Most parents would find this program suitable for all ages.

TV-PG Parental Guidance Suggested. This program contains material that parents may find unsuitable for younger children.
The program contains one or more of the following:
(D) Some suggestive dialogue
(L) Infrequent coarse language
(V) Moderate violence
(S) Some sexual situations

TV-14 Parents Strongly Cautioned. This program contains some material that many parents would find unsuitable for children under 14 years of age.
This program contains one or more of the following:
(D) Intensely suggestive dialogue
(L) Strong coarse language
(S) Intense sexual situations
(V) Intense violence

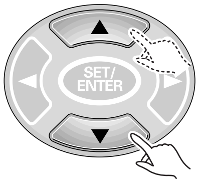
TV-MA Mature Audience Only. This program is specifically designed to be viewed by adults and therefore may be unsuitable for children under 17.
This program contains one or more of the following:
(L) Crude indecent language
(S) Explicit sexual activity
(V) Graphic violence

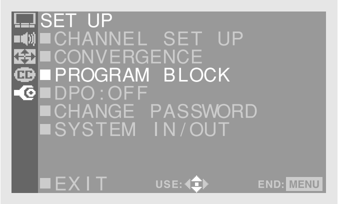

TV/SAT/DVD
MENU
SET/
ENTER
Pioneer

SETTING THE PROGRAM BLOCKING LEVEL

1 Press MENU and select SET UP by using the ▲ or ▼ button and then pressing SET/ENTER.

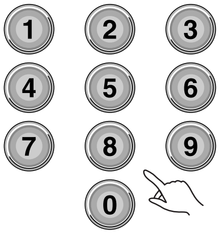
2 Select PROGRAM BLOCK in the same way.

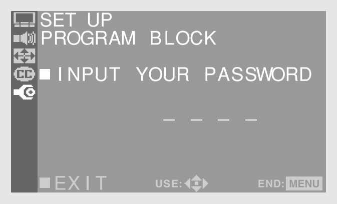



SET UP
CHANNEL SET UP
CONVERGENCE
PROGRAM BLOCK
DPO:OFF
CHANGE PASSWORD
SYSTEM IN/OUT
EXIT
USE:
END: MENU

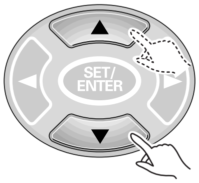
3 Enter password.

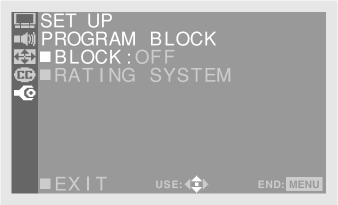
- Press numeric buttons '0' through '9' to enter a four-digit password.
- If the password has not been changed as described in Changing Password, enter the default password of '1234'.
- If you wish to change the password, see p. 36 Changing Password for instructions on how to do so.

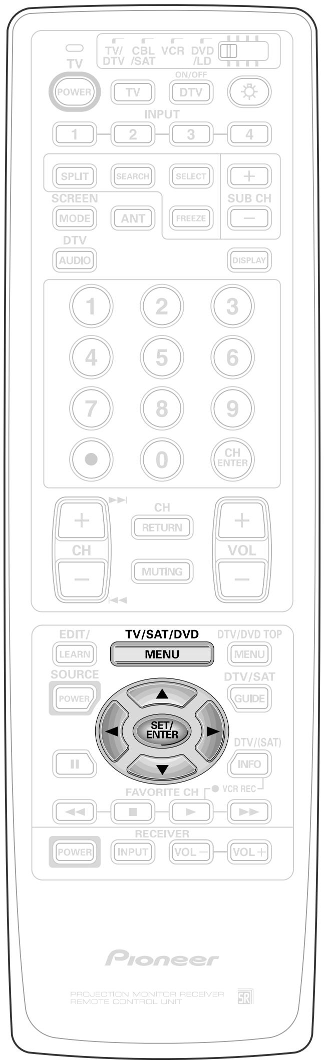

1
2
3
4
5
6
7
8
9
0


SET UP
PROGRAM BLOCK
INPUT YOUR PASSWORD
_ _ _ _
EXIT
USE:
END: MENU

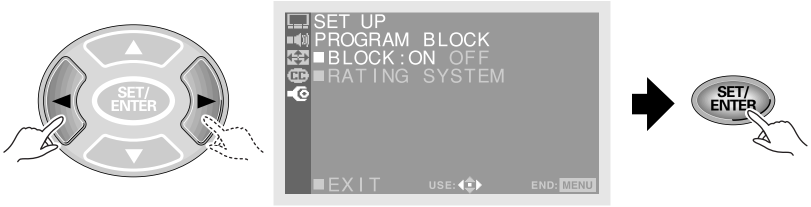
4 Select BLOCK .




SET UP
PROGRAM BLOCK
BLOCK:OFF
RATING SYSTEM
EXIT
USE:
END: MENU


TV/SAT/DVD
MENU
SET/ENTER
Pioneer

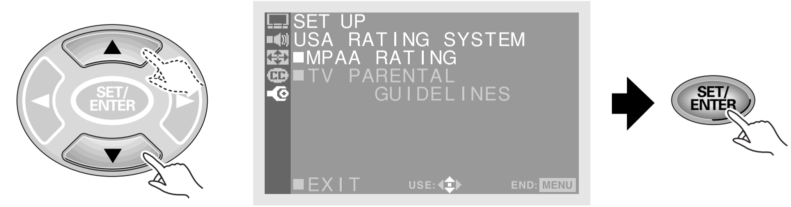
5 Set BLOCK to ON.


SET/ENTER
SET/ENTER

```
SET UP
PROGRAM BLOCK
■BLOCK:ON OFF
■RATING SYSTEM

■EXIT        USE:        END: MENU
```

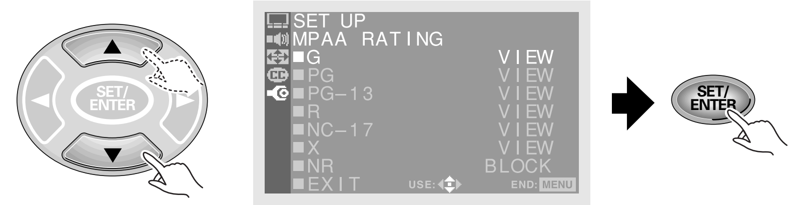
6 Select MPAA RATING or TV PARENTAL GUIDELINES .


SET/ENTER
SET/ENTER

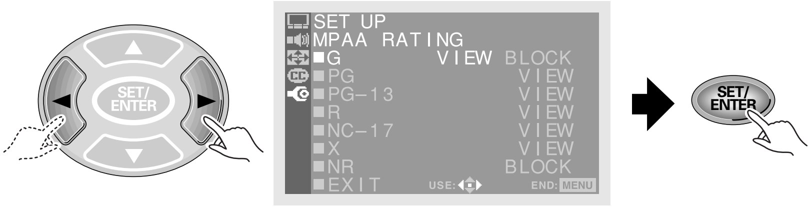
```
SET UP
USA RATING SYSTEM
■MPAA RATING
■TV PARENTAL
     GUIDELINES

■EXIT        USE:        END: MENU
```

7 Select and then confirm the rank of the MPAA RATING.

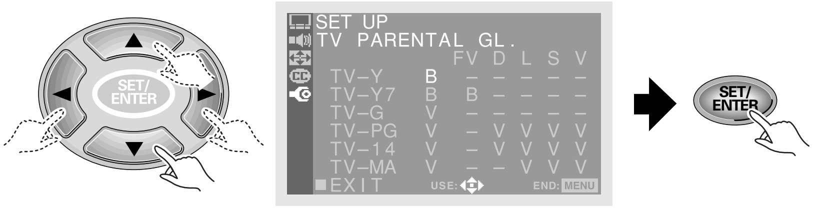

SET/ENTER
SET/ENTER

```
SET UP
MPAA RATING
■G                 VIEW
■PG                VIEW
■PG-13             VIEW
■R                 VIEW
■NC-17             VIEW
■X                 VIEW
■NR               BLOCK
■EXIT        USE:        END: MENU
```


SET/ENTER
SET/ENTER

```
SET UP
MPAA RATING
■G            VIEW BLOCK
■PG                VIEW
■PG-13             VIEW
■R                 VIEW
■NC-17             VIEW
■X                 VIEW
■NR               BLOCK
■EXIT        USE:        END: MENU
```

8 Select and confirm the rank of the TV PARENTAL GUIDELINES.

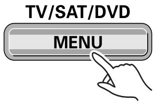

SET/ENTER
SET/ENTER

```
SET UP
TV PARENTAL GL.
            FV  D  L  S  V
 TV-Y    B   -  -  -  -  -
 TV-Y7   B   B  -  -  -  -
 TV-G    V   -  -  -  -  -
 TV-PG   V   -  V  V  V  V
 TV-14   V   -  V  V  V  V
 TV-MA   V   -  -  V  V  V
■EXIT        USE:        END: MENU
```

- Each time the SET/ENTER button is pressed, the setting will toggle between ‘B’ (Block) and ‘V’ (View).

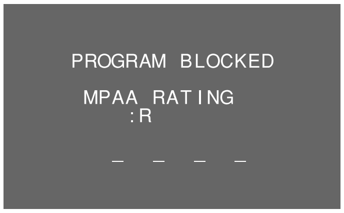
NOTE:
- *Blocking programming with a low rating will cause all programming with a higher rating also to be blocked.*
- *The ‘NR’ (not rated) of the MPAA RATING may be set to ‘View’ or ‘Block’ without regarded to other ratings.*

9 After setting, press MENU to turn the menu off.



HOW TO REMOVE BLOCKING FROM A PROGRAM IN PROGRESS

When a selected program or a program on a channel to which you have just changed has a rating higher than the current program blocking rating, the picture and sound will cut off and an enter password screen will appear.



PROGRAM BLOCKED

MPAA RATING
:R

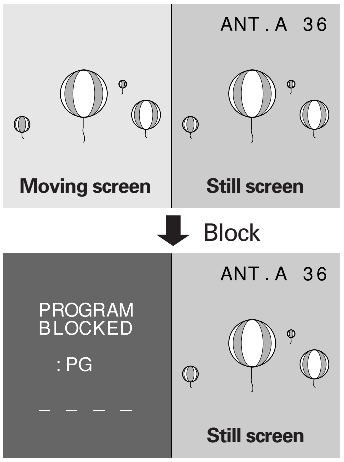
_ _ _ _

Once the password has been entered, blocking will be removed.

NOTE:
Even when a password has been entered to cancel a block, if the monitor power is turn OFF then turned ON again, the Program Blocked screen will appear.

REMOVING BLOCKING IN MULTI-SCREEN MODE

- Just as in normal single-screen mode, programs are blocked in SPLIT screen and SEARCH screen mode (see pages 40 and 41), but blocking may be removed only from the Main picture.
  To remove blocking from a Sub picture or Search picture screen, switch to the Main picture for that channel and then remove blocking.
- When viewing in FREEZE screen (p. 40) mode, only programming on the Moving screen to the left will be blocked and the programming on the Still screen to the right will be displayed as is.



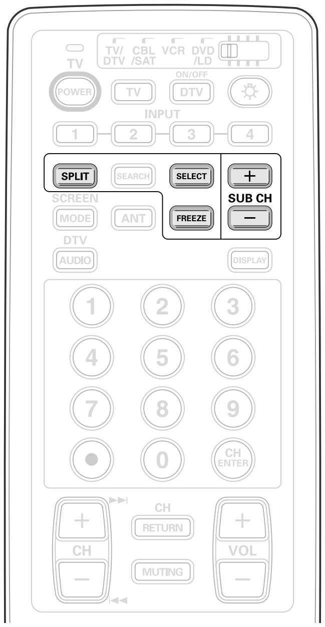
- When blocking is on during SEARCH screen mode, the screen at search picture side will be blacked out (mute) without displaying: “PROGRAM BLOCKED”.

■ CHANGING PASSWORD

If you forget the password

When the message ‘INPUT YOUR PASSWORD’ shown in step 3 is displayed, press the RETURN button on the front panel and hold it down for 3 seconds or longer.
The password will become “1234”.

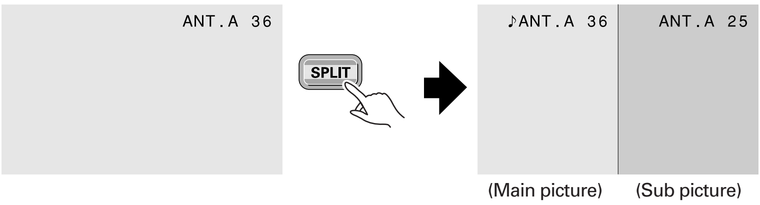
■ MULTI-SCREEN FUNCTION


TV
TV/ DTV
CBL /SAT
VCR
DVD /LD
POWER
TV
DTV
ON/OFF
INPUT
1
2
3
4
SPLIT
SEARCH
SELECT
SUB CH
SCREEN
MODE
ANT
FREEZE
DTV
AUDIO
DISPLAY
CH ENTER
CH
RETURN
VOL
MUTING

VIEWING TWO SCREENS (SPLIT screen)

The screen can be split vertically, making it possible to view different images on the left and right.

Press the SPLIT button.


ANT.A 36
SPLIT
♪ANT.A 36
ANT.A 25
(Main picture)
(Sub picture)

- The screen on which ♪ is displayed is the main picture, and the other screen is the sub-picture. Sound will be output for the main picture.
- Regular operations can be performed on the main picture.
- When the SUB CH +,- buttons are pressed, the channel for the sub-picture will be changed.
- When the SELECT button is pressed, the ♪ will move to the other screen.
- The MONITOR OUTPUT terminal outputs the main picture signal.
- Pressing the SPLIT button again will restore the original screen.

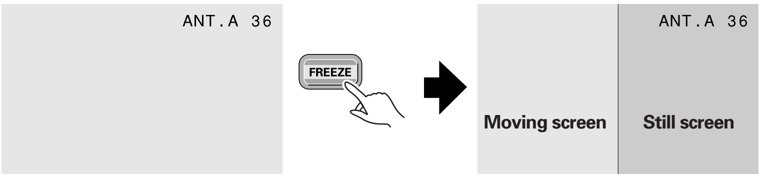
NOTES:

- *The same image cannot be viewed as both the main picture and the sub-picture.*
- *Pressing the MENU button in SPLIT or FREEZE screen mode restores the screen display to normal and displays the menu on screen.*
- *These functions cannot be used while watching a DTV broadcast using the SH-D09 digital tuner (sold separately).*
- *These functions cannot be used when INPUT 1 or INPUT 2 is receiving a 1080i or 480p component signal (or the signals might not be received or noise might be generated).*
- *When a TV broadcast is being received, the screen on the right will not show the antenna B signal.*
- *RGB signals input from INPUT3 cannot be displayed.*
- *Continuous operation for extended periods in SPLIT or FREEZE screen mode may burn out the screen. We thus recommend that these modes only be used in conjunction with the normal screen mode.*
- *If the non-interlace signal for a TV game etc. is entered to the left screen during SPLIT screen mode, the right screen may be disrupted. If this occurs, use the right screen for TV game etc. entry.*

MAKING NOTES ON PROGRAM CONTENT (FREEZE screen)

The screen can be frozen, such as for taking down a recipe from a cooking program or an address for entering a quiz or the like.

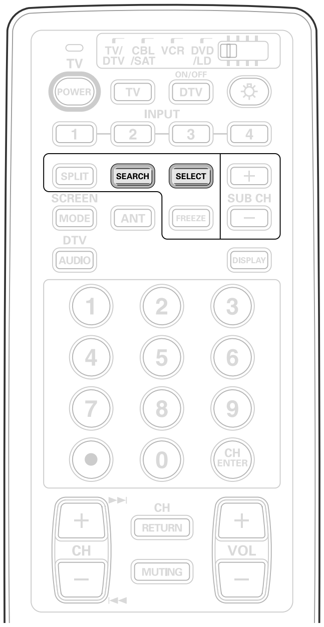
Press the FREEZE button.


ANT.A 36
FREEZE
ANT.A 36
Moving screen
Still screen

- This function is operable only with the normal screen.
- Pressing the FREEZE button again will restore the original screen.

SEARCHING FOR A PROGRAM ON A DIFFERENT CHANNEL (SEARCH screen)

The screen on the right side can be made into nine or three different screens, making it possible to search for programs or enjoy multiple images.

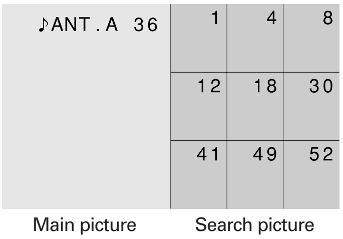

TV
TV/ DTV
CBL /SAT
VCR
DVD /LD
ON/OFF
POWER
TV
DTV
INPUT
1
2
3
4
SPLIT
SEARCH
SELECT
SCREEN
MODE
ANT
FREEZE
SUB CH
DTV
AUDIO
DISPLAY
1
2
3
4
5
6
7
8
9
●
0
CH ENTER
CH
RETURN
MUTING
CH
VOL

Press the SEARCH button.

- Each time the SEARCH button is pressed, the screen mode changes in the following order.

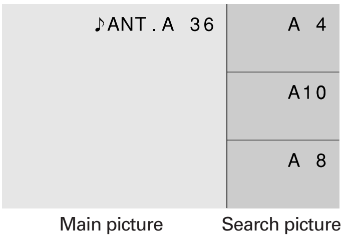
→ Normal screen/SPLIT screen
3-SEARCH screen ← 9-SEARCH screen ←

① **9-SEARCH screen**


♪ANT . A 36
1
4
8
12
18
30
41
49
52
Main picture
Search picture

- On the search picture, the antenna A preset channel (see page 28) will be displayed as a frozen image. If 9 or more channels have been preset, the screens will automatically be switched and displayed.
- The search picture cannot be operated.
- If the channel or input source is changed, SEARCH screen mode will turn off.

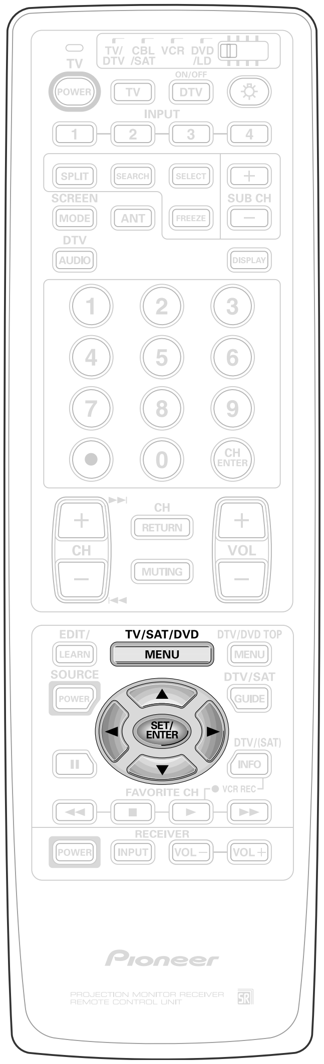
② **3-SEARCH screen**


♪ANT . A 36
A 4
A10
A 8
Main picture
Search picture

- Press the SELECT button to select image that you wish to switch the channel or input source to. When the color of the channel or input indicator changes to yellow, screen operations can be performed. (Use only the selector buttons, direct channel selection buttons and CH +,- buttons.)
- Sound output is limited to the main picture.

- *Pressing the MENU button in SEARCH screen mode restores the screen display to normal and displays the menu on screen.*
- *These functions cannot be used while watching a DTV broadcast using the SH-D09 digital tuner (sold separately).*
- *These functions cannot be used when INPUT 1 or INPUT 2 is receiving a 1080i or 480p component signal (or the signals might not be received or noise might be generated).*
- *RGB signals input from INPUT3 cannot be displayed.*
- *Continuous operation for extended periods in SEARCH screen mode may burn out the screen. We thus recommend that these modes only be used in conjunction with the normal screen mode.*
- *The only channels displayed on the SEARCH screen will be those with input signals input from antenna A. Antenna B channels cannot be displayed on this screen.*
- *If the non-interlace signal for a TV game etc. is entered to the left screen during 9-SEARCH screen or 3-SEARCH screen modes, the screen may be disrupted.*

■ MULTI-SCREEN FUNCTION

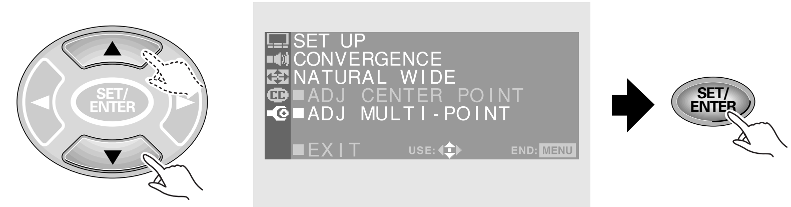

TV
TV/DTV
CBL/SAT
VCR
DVD/LD
ON/OFF
POWER
TV
DTV
INPUT
1
2
3
4
SPLIT
SEARCH
SELECT
SCREEN
MODE
ANT
FREEZE
SUB CH
DTV
AUDIO
DISPLAY
1
2
3
4
5
6
7
8
9
●
0
CH ENTER
CH
RETURN
CH
VOL
MUTING
EDIT/
LEARN
TV/SAT/DVD
MENU
DTV/DVD TOP
MENU
SOURCE
POWER
DTV/SAT
GUIDE
SET/ENTER
DTV/(SAT)
INFO
FAVORITE CH
VCR REC
RECEIVER
POWER
INPUT
VOL –
VOL +
Pioneer
PROJECTION MONITOR RECEIVER
REMOTE CONTROL UNIT

Convergence adjustment may be fined-tuned from here.

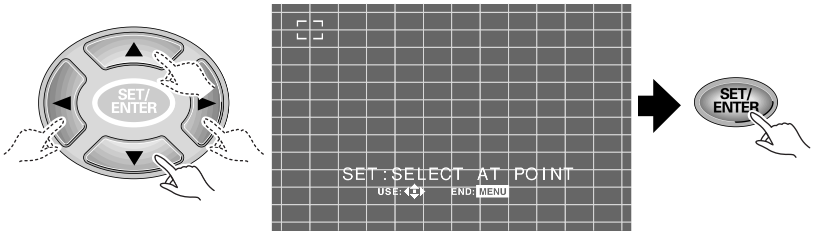
1 Press MENU and select **SET UP** by using the ▲ or ▼ button and then pressing SET/ENTER.

2 Adjust the center point convergence.

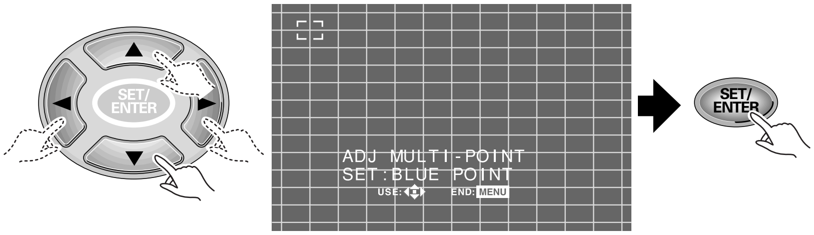
3 Select **ADJ MULTI-POINT** .


SET/ENTER
SET UP
CONVERGENCE
NATURAL WIDE
■ADJ CENTER POINT
■ADJ MULTI-POINT
■EXIT
USE:
END: MENU
SET/ENTER

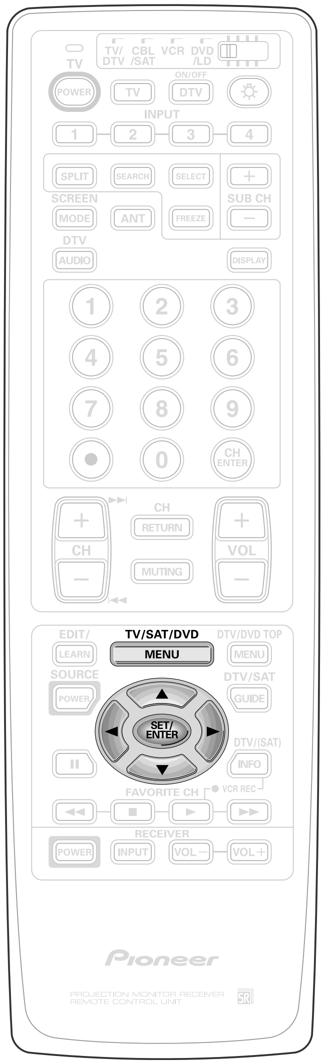
4 Select the adjust point.


SET/ENTER
SET : SELECT AT POINT
USE:
END: MENU
SET/ENTER

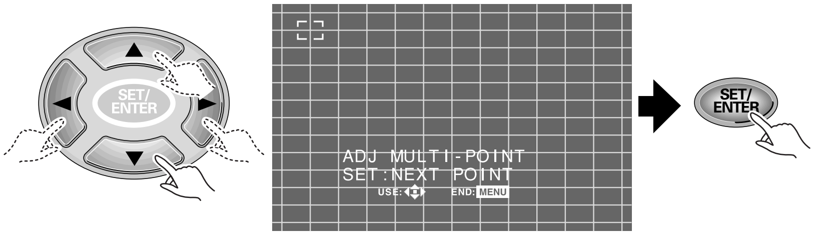
5 Adjust the red line.


SET/ENTER
ADJ MULTI-POINT
SET : BLUE POINT
USE:
END: MENU
SET/ENTER

NOTES:
- *The number of adjustment points varies according to the screen mode. The cursor is partially invisible around the edge of the screen according to the screen mode.*
- *It is not possible to adjust all these points (points of change on the cross-hatch).*
- *Some of the cross-hatch lines are not straight, but this is not a malfunction. They are not always straight on a normal TV.*


TV/SAT/DVD
MENU
SET/ENTER
Pioneer

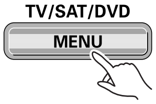
6 Adjust the blue line.


SET/ENTER
USE:
END: MENU
SET/ENTER

ADJ MULTI-POINT
SET:NEXT POINT

- The brackets which shows the adjusting point will move in order.
  Move to the next point to be adjusted, and repeat steps 4 to 6.

7 After completing the convergence adjustment, press MENU to turn the menu off.


TV/SAT/DVD
MENU

■ SPECIAL NOTES

● Picture Adjustments

MOVIE or GAME mode may not be selected when receiving RGB input.

GAME mode setting:
- *All signals output from the Projection Monitor will be unaffected. Only the original output signal is sent through the output jacks.*

Picture Quality setting:
- *The COLOR, TINT, and SHARP settings may not be changed when receiving RGB input.*
- *When DPO is on, CONTRAST, BLACK LEVEL and COLOR cannot be adjusted.*
- *When picture quality has been adjusted, the user mode data will be overwritten with the new settings.*

Other Picture Quality setting:

Only the COLOR TEMP settings may be changed when receiving RGB input.

PURECINEMA adjustment:

Normally, this function should be set to “HQ” (High Quality), however, occasionally this setting may cause slight syncopation problems with the audio track. If you are bothered by this, select “STD” (Standard) or “OFF”. If “OFF” is selected, normal progressive signal processing is performed.

● Sound Adjustments

BASS, TREBLE and BALANCE are SPEAKER mode settings, which can only be adjusted when mode is NORMAL.

Surround Mode setting:
- *This function cannot be used when the SPEAKER mode is CENTER IN or when the SPEAKER mode is OFF and AUDIO OUT mode is FIXED.*
- *The surround effect cannot be obtained with mono sound.*
- *In some cases, the surround effect may be minimal.*

● Connection with Receiver (1)

Speaker and AUDIO OUT Setting:
- *After the speaker mode is set to CENTER IN, the volume of the center speaker should be controlled from this monitor.*
- *If AUDIO OUT is set to VAR and the sound is distorted, lower the Monitor volume.*

● Connection with Receiver (2)

SYSTEM MODE ON :
- *The input cannot be switched even if you press the Input selector button of the remote control unit.*
- *On the sub-picture of a SPLIT screen, only the input signal from the antenna can be displayed.*
- *The SEARCH screen function will not be operable.*
- *No signal will be output from the AUDIO OUTPUT terminal.*
- *Setting SYSTEM MODE ON will cause RGB input signals to not be displayed.*

● Changing Screen Mode

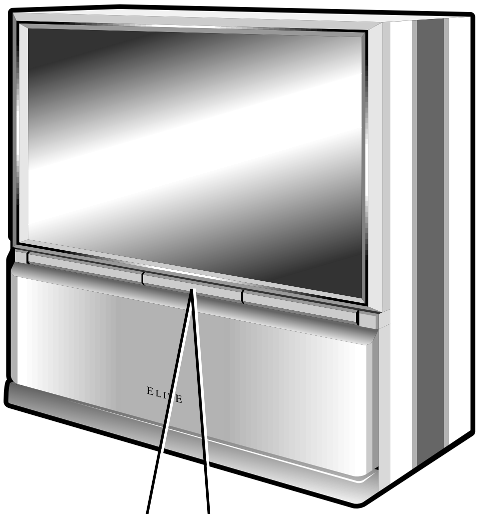
- *When 1080i or 480p component signals or RGB signals are input, SCREEN MODE will be limited to FULL.*

8. PANEL FACILITIES AND SPECIFICATIONS

■ PANEL FACILITIES for PRO-610HD and PRO-510HD

A flip-down door conceals the control panel. Push gently and release, to open the door. To close the door, lift it back up into place.

NOTE:
If you accidentally pull the door, it may not shut properly. Push the door back in to shut it.



① POWER STANDBY/ON indicator

red: STANDBY
green: ON

② DTV indicator

Lights when receiving a digital television broadcast.
If the SH-D09 digital tuner (sold separately) has been connected, the DTV indicator may still blink even when the power has been turned off. (This is not a defect.)

③ DPO sensor

Sensor to detect the room brightness.

④ MAIN POWER switch

Press once to turn on the main power (STANDBY mode). Press again to turn off the main power.

⑤ POWER button (STANDBY/ON)

Press once to turn on the Monitor. Press again to turn off the Monitor.

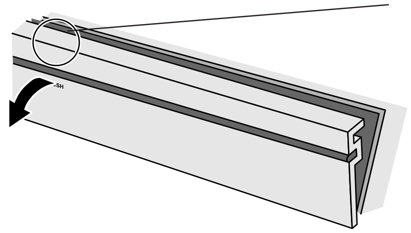
⑥ INPUT SELECTOR button

Press to select your program source. Each press of the INPUT SELECTOR changes the selection to the next source.

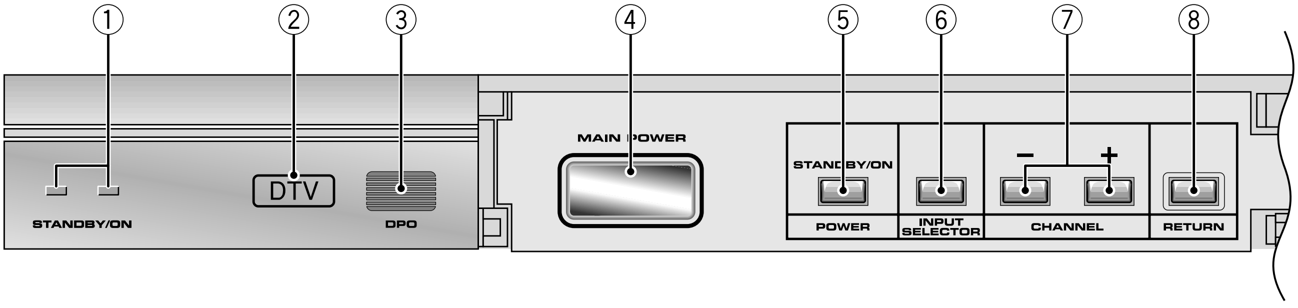
→ TV → (DTV) → INPUT 1
INPUT 4 ← INPUT 3 ← INPUT 2 ←

⑦ CHANNEL buttons

Press plus (+) or minus (–) to tune to a higher or lower channel. Only the preset channels can be tuned in using these buttons.



In some cases, the door may only open slightly when pushed. In such cases, open the door with your finger as shown in the figure at left.



⑧ RETURN button

Press to set the Projection Monitor to its initial mode.

Initial mode

Input selector: Set to TV.
TV channel: Remains at the last channel set.
VOLUME: Remains at the last setting.
MUTING: OFF
PICTURE
  MODE: STD
  Parameters: Set to 0.
  3D Y/C LEVEL: 3
  3D NR LEVEL: 3
  COLOR TEMP: STD
  FLESH TONE: ON
  PURECINEMA: HQ
  SVM HIGH
SOUND
  MTS: MAIN
  Parameters: Set to 0.
  SURROUND: OFF
  SUPER BASS: OFF
SCREEN
  MODE: NATURAL WIDE
  V. POSITION: Set to 0.
CC: OFF
DPO: OFF
SYSTEM IN/OUT
  SPEAKER: NORMAL
  AUDIO OUT: FIXED
  SYSTEM MODE: OFF
  DTV OUT: OFF (When the SH-D09 is connected)

- When this button is pressed while adjusting the MULTI-POINT convergence, the MULTI-POINT convergence returns to the initial mode.

⑨ VOLUME buttons

Press plus (+) button to increase the volume, press minus (–) button to decrease it.

⑩ INPUT 4 jacks

These inputs are for Video Movie and VCR. Use RCA-type pin plug cords (the same as those used in Hi-Fi systems) and S-VIDEO cords for connections. When the audio source to be connected is monaural, connect the source to the L-(MONO) jack.

CAUTION:

Do not press any operation button on the Projection Monitor or the remote control unit while recording. Signals from the MONITOR OUTPUT jacks may be temporarily interrupted when a button is pressed.

ATTENTION

The Projection Monitor Receiver will not function properly in the following cases.

- An electrical discharge in the CRT.
- Lightning storms.
- High static electricity environment.
- Poor voltage regulation in the power source.

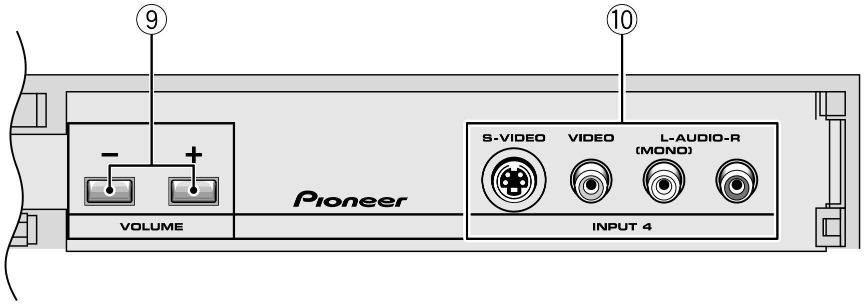
If the Projection Monitor does not operate properly, reset it as follows:

1. Turn off the power of the unit with the ④ MAIN POWER switch.
2. After approximately 1 minute, turn on the power with ④ MAIN POWER switch and ⑤ POWER button.

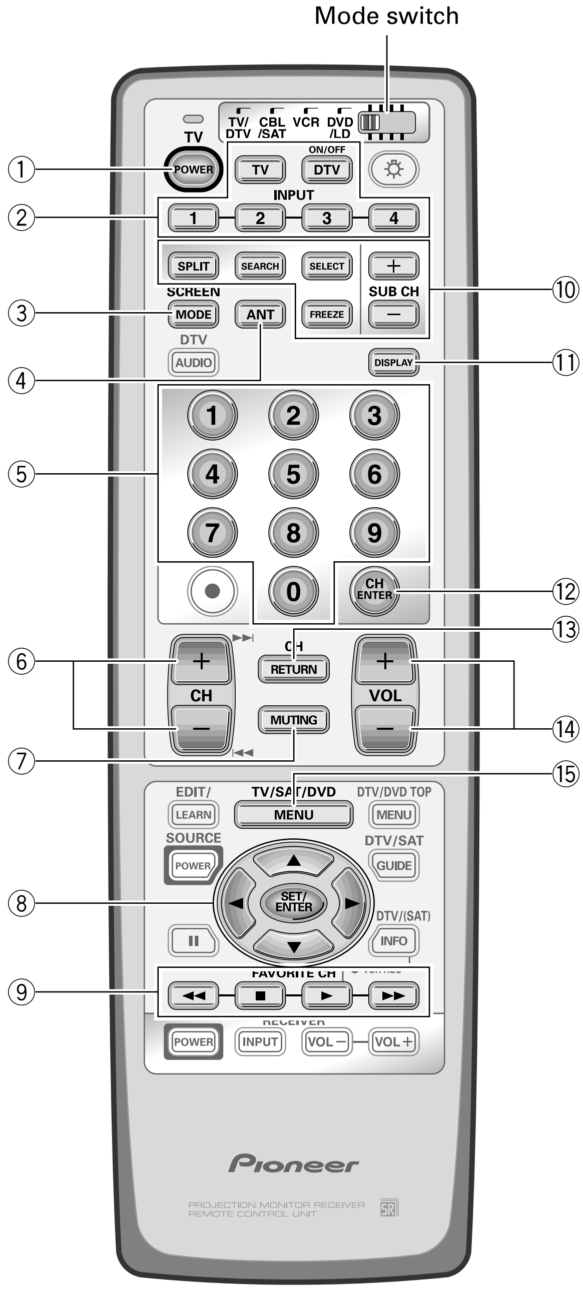
If the normal operation cannot be restored after the above treatment, immediately unplug the power cord and call your nearest PIONEER-authorized service center.

NOTE:

On rare occasions, an electrical discharge may occur inside the CRT. It makes a short, sharp pop and either no sound is produced or the volume level changes by itself. The SPLIT screen and SEARCH screen functions will be cancelled automatically if an electrical discharge occurs when this function is engaged.



■ REMOTE CONTROL UNIT (AXD1448: CU-SD110) for PRO-610HD and PRO-510HD


Mode switch
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭
⑮
TV/DTV
CBL/SAT
VCR
DVD/LD
TV
POWER
TV
ON/OFF
DTV
INPUT
1
2
3
4
SPLIT
SEARCH
SELECT
+
SUB CH
−
SCREEN
MODE
ANT
FREEZE
DTV
AUDIO
DISPLAY
1
2
3
4
5
6
7
8
9
0
CH
ENTER
CH
RETURN
+
CH
−
MUTING
+
VOL
−
EDIT/
LEARN
TV/SAT/DVD
MENU
DTV/DVD TOP
MENU
SOURCE
POWER
DTV/SAT
GUIDE
SET/
ENTER
DTV/(SAT)
INFO
FAVORITE CH
RECEIVER
POWER
INPUT
VOL−
VOL+
Pioneer
PROJECTION MONITOR RECEIVER
REMOTE CONTROL UNIT

Set the mode switch to TV/DTV.

① **TV POWER button (STANDBY/ON)**
Turns the power of the monitor on and off.

② **Input Selector buttons (TV, DTV*¹, INPUT 1 to INPUT 4)**
Press the button to select the source you wish to watch. The screen will display your selection.

③ **SCREEN MODE button**
Press to select the SCREEN MODE.

④ **ANT (antenna selector) button**
Press to switch between ANTENNA-A and ANTENNA-B when you wish to watch TV.

⑤ **Direct channel selection buttons**
Press the button (or buttons) that corresponds to the channel that you wish to watch.

⑥ **CH (channel) +, – button**
Press plus (+) or minus (–) to tune in a higher or lower channel. Only the preset channels can be tuned in using these buttons.

⑦ **MUTING button**
Press to temporarily turn off the sound. Press again to return to the previous volume level.

⑧ **Select/Adjust/Set buttons (SET/ENTER, ◄, ►, ▲, ▼)**

◄, ►, ▲, ▼:	Press to select or adjust items on the menu screen.
SET/ENTER:	Press to activate the selected function.

⑨ **FAVORITE CH buttons**
These buttons call up the channels that have been assigned to them.

⑩ **SPLIT/SEARCH screen buttons**

SPLIT:	Press to turn the SPLIT screen function on and off.
SEARCH:	Press to select the SEARCH screen mode.
SELECT:	Selects the screen for switching the channel or input source.*2
FREEZE:	When this button is pressed with the regular screen, the screen will change to the SPLIT screen and the picture at the time the button was pressed will become the sub-picture, displayed as a frozen image.
SUB CH +, –:	Used to switch the channel for the sub-picture of the SPLIT screen.

⑪ **DISPLAY button**
Press to display the input source, channel, setting and other screen indicators for a few seconds.

⑫ **CH ENTER button**
Fix the selected channel with the direct channel selection buttons.

⑬ **CH RETURN (channel return) button**
Press to switch between the current channel and the channel you were watching immediately before.

⑭ **VOL (volume) +, – buttons**
Press plus (+) button to increase the volume, press minus (–) button to decrease it.
Volume level will appear on the screen as numbers and a bar graph. The maximum volume level is “63”.
The display will disappear from the screen after 2 seconds.

⑮ **MENU button**
Press to turn on the menu screen for use in function selection.
Press again to return to normal TV screen.

*1 For viewing DTV broadcasts, the SH-D09 digital tuner (sold separately) is necessary.

*2 With the 9-SEARCH screen, the search picture’s input source and channel cannot be switched.

■ PANEL FACILITIES for SD-582HD5 and SD-532HD5

A flip-down door conceals the control panel. Push gently and release, to open the door. To close the door, lift it back up into place.

NOTE:
If you accidentally pull the door, it may not shut properly. Push the door back in to shut it.

① POWER STANDBY/ON indicator

red: STANDBY
green: ON

② DPO sensor

Sensor to detect the room brightness.

③ MAIN POWER switch

Press once to turn on the main power (STANDBY mode). Press again to turn off the main power.

④ POWER button (STANDBY/ON)

Press once to turn on the Monitor. Press again to turn off the Monitor.

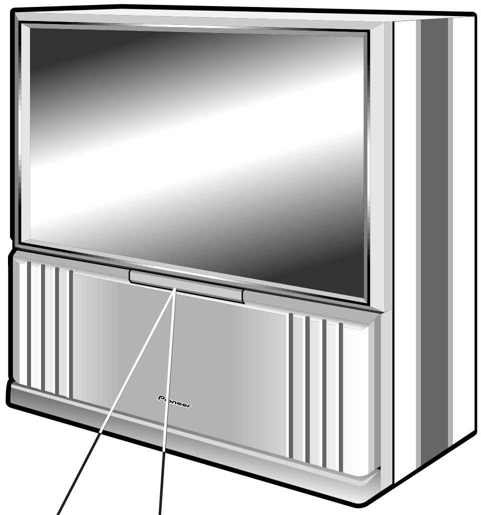
⑤ INPUT SELECTOR button

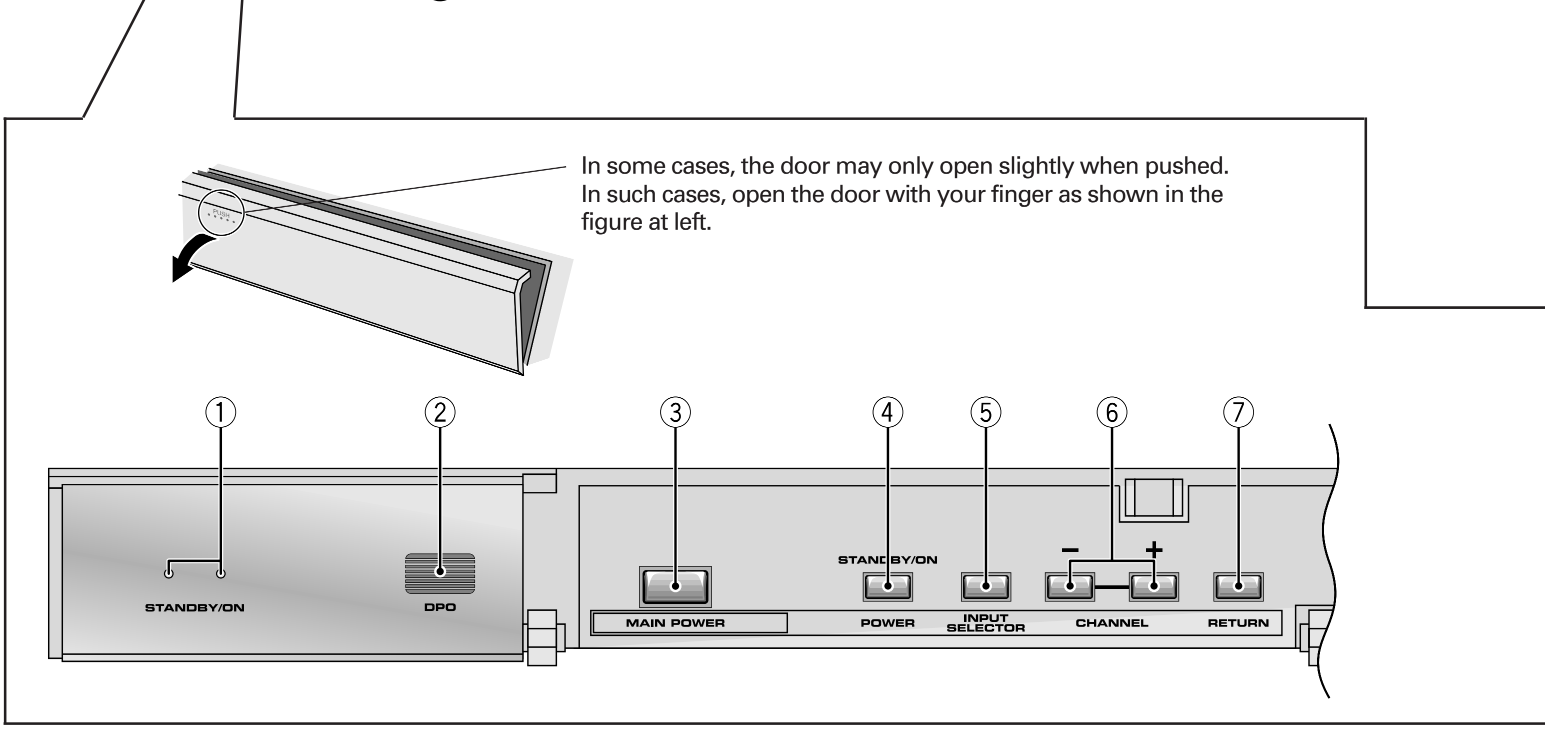
Press to select your program source. Each press of the INPUT SELECTOR changes the selection to the next source.

→ TV → INPUT 1 ┐
INPUT 4 ← INPUT 3 ← INPUT 2 ←┘

⑥ CHANNEL buttons

Press plus (+) or minus (–) to tune to a higher or lower channel. Only the preset channels can be tuned in using these buttons.





In some cases, the door may only open slightly when pushed. In such cases, open the door with your finger as shown in the figure at left.

⑦ RETURN button

Press to set the Projection Monitor to its initial mode.

Initial mode

Input selector:	Set to TV.
TV channel:	Remains at the last channel set.
VOLUME:	Remains at the last setting.
MUTING:	OFF
PICTURE	
MODE:	STD
Parameters:	Set to 0.
3D Y/C LEVEL:	3
3D NR LEVEL:	3
COLOR TEMP:	STD
FLESH TONE:	ON
SOUND	
MTS:	MAIN
Parameters:	Set to 0.
SURROUND:	OFF
SUPER BASS:	OFF
SCREEN	
MODE:	NATURAL WIDE
V. POSITION:	Set to 0.
CC:	OFF
DPO:	OFF

- When this button is pressed while adjusting the MULTI-POINT convergence, the MULTI-POINT convergence returns to the initial mode.

⑧ VOLUME buttons

Press plus (+) button to increase the volume, press minus (–) button to decrease it.

⑨ INPUT 4 jacks

These inputs are for Video Movie and VCR. Use RCA-type pin plug cords (the same as those used in Hi-Fi systems) and S-VIDEO cords for connections. When the audio source to be connected is monaural, connect the source to the L-(MONO) jack.

CAUTION:

Do not press any operation button on the Projection Monitor or the remote control unit while recording. Signals from the MONITOR OUTPUT jacks may be temporarily interrupted when a button is pressed.

ATTENTION

The Projection Monitor Receiver will not function properly in the following cases.

- An electrical discharge in the CRT.
- Lightning storms.
- High static electricity environment.
- Poor voltage regulation in the power source.

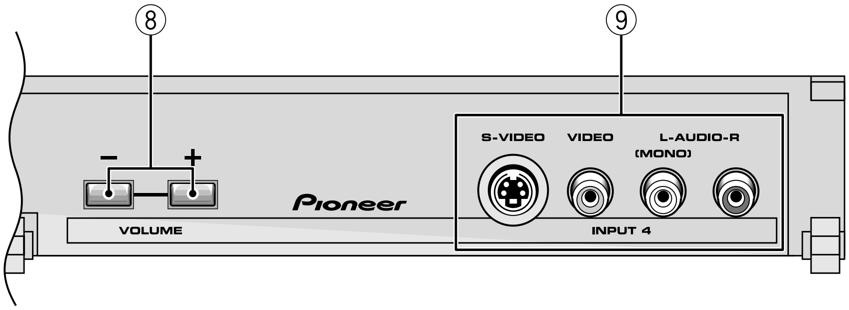
If the Projection Monitor does not operate properly, reset it as follows:

1. Turn off the power of the unit with the ③ MAIN POWER switch.
2. After approximately 1 minute, turn on the power with ③ MAIN POWER switch and ④ POWER button.

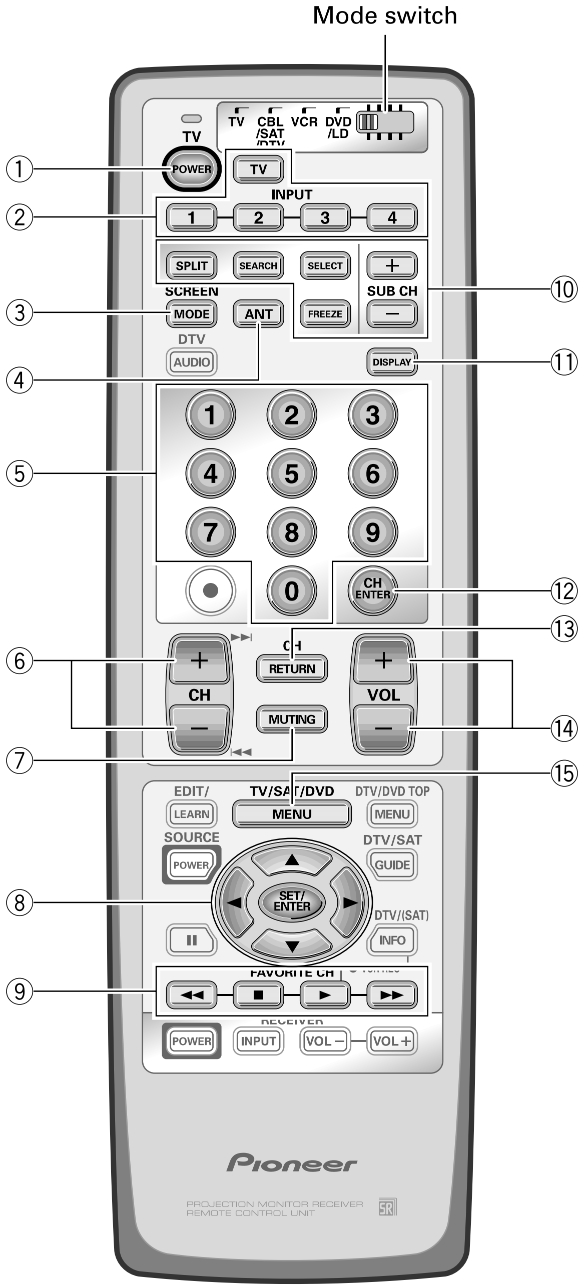
If the normal operation cannot be restored after the above treatment, immediately unplug the power cord and call your nearest PIONEER-authorized service center.

NOTE:

On rare occasions, an electrical discharge may occur inside the CRT. It makes a short, sharp pop and either no sound is produced or the volume level changes by itself. The SPLIT screen and SEARCH screen functions will be cancelled automatically if an electrical discharge occurs when this function is engaged.



■ REMOTE CONTROL UNIT (AXD1449: CU-SD111) for SD-582HD5 and SD-532HD5


Mode switch
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭
⑮
TV
CBL /SAT /DTV
VCR
DVD /LD
TV
POWER
TV
INPUT
1
2
3
4
SPLIT
SEARCH
SELECT
SCREEN
MODE
ANT
FREEZE
SUB CH
DTV
AUDIO
DISPLAY
1
2
3
4
5
6
7
8
9
0
CH ENTER
CH
RETURN
CH
VOL
MUTING
EDIT/
LEARN
TV/SAT/DVD
MENU
DTV/DVD TOP
MENU
SOURCE
POWER
DTV/SAT
GUIDE
SET/ ENTER
DTV/(SAT)
INFO
FAVORITE CH
RECEIVER
POWER
INPUT
VOL –
VOL +
Pioneer
PROJECTION MONITOR RECEIVER
REMOTE CONTROL UNIT

Set the mode switch to TV.

① **TV POWER button (STANDBY/ON)**
Turns the power of the monitor on and off.

② **Input Selector buttons (TV, INPUT 1 to INPUT 4)**
Press the button to select the source you wish to watch. The screen will display your selection.

③ **SCREEN MODE button**
Press to select the SCREEN MODE.

④ **ANT (antenna selector) button**
Press to switch between ANTENNA-A and ANTENNA-B when you wish to watch TV.

⑤ **Direct channel selection buttons**
Press the button (or buttons) that corresponds to the channel that you wish to watch.

⑥ **CH (channel) +, – button**
Press plus (+) or minus (–) to tune in a higher or lower channel. Only the preset channels can be tuned in using these buttons.

⑦ **MUTING button**
Press to temporarily turn off the sound. Press again to return to the previous volume level.

⑧ **Select/Adjust/Set buttons (SET/ENTER, ◄, ►, ▲, ▼)**

◄, ►, ▲, ▼:	Press to select or adjust items on the menu screen.
SET/ENTER:	Press to activate the selected function.

⑨ **FAVORITE CH buttons**
These buttons call up the channels that have been assigned to them.

⑩ **SPLIT/SEARCH screen buttons**

SPLIT:	Press to turn the SPLIT screen function on and off.
SEARCH:	Press to select the SEARCH screen mode.
SELECT:	Selects the screen for switching the channel or input source.*1
FREEZE:	When this button is pressed with the regular screen, the screen will change to the SPLIT screen and the picture at the time the button was pressed will become the sub-picture, displayed as a frozen image.
SUB CH +, –:	Used to switch the channel for the sub-picture of the SPLIT screen.

⑪ **DISPLAY button**
Press to display the input source, channel, setting and other screen indicators for a few seconds.

⑫ **CH ENTER button**
Fix the selected channel with the direct channel selection buttons.

⑬ **CH RETURN (channel return) button**
Press to switch between the current channel and the channel you were watching immediately before.

⑭ **VOL (volume) +, – buttons**
Press plus (+) button to increase the volume, press minus (–) button to decrease it.
Volume level will appear on the screen as numbers and a bar graph. The maximum volume level is “63”.
The display will disappear from the screen after 2 seconds.

⑮ **MENU button**
Press to turn on the menu screen for use in function selection.
Press again to return to normal TV screen.

*1 With the 9-SEARCH screen, the search picture’s input source and channel cannot be switched.

NOTE:
If the remote control unit is left in total darkness for a long period of time, it will not emit light, but will not be damaged. In this case, place it in a bright place for a little while before using it.

■ SPECIFICATIONS for PRO-610HD and PRO-510HD

Display and amplifier section

Reception system .... American TV standard NTSC system
Screen size .... 58" (PRO-610HD)
53" (PRO-510HD)
CRT .... 7" High focus CRT x 3
Brightness (White peak) .... 420 Foot-Lambert (PRO-610HD)
500 Foot-Lambert (PRO-510HD)
[White window signal input contrast Max.]
without protective screen
Horizontal resolution ...... More than 1250 lines (PRO-610HD)
More than 1150 lines (PRO-510HD)
[Input digital test pattern (1250 lines resolution)]
Input terminals .... 4 video inputs
4 S-VIDEO input jacks (Y/C separate INPUT)
2 COMPONENT VIDEO INPUT jacks (Y, PB, PR)
4 audio inputs
CENTER INPUT jack
Mini D-sub 15 pin INPUT jack (RGB)
Output terminals .... MONITOR/DTV, TV, AUDIO
Input terminal signal ratings
  Input signal
    Video signal:
      Composite and S-VIDEO (Y): 1.0 Vp-p (75 ohms load)
      COMPONENT (Y): 1.0 Vp-p (75 ohms load)
      (PB, PR): 0.7 Vp-p (75 ohms load)
      Mini D-sub 15 pin (RGB): 0.7 Vp-p (75 ohms load)
    Audio signal (including CENTER): 400mV rms
  Input impedance .... Video input: 75 ohms
  Audio input (including CENTER): 22 kilo-ohms or more
  Input signal polarity (Video) .... Synchronized negative
Output terminal signal ratings
  Output signal .... Video signal: 1 Vp-p (75 ohms load)
  Audio signal: 500 mV rms (100 % modulation)
  Output impedance .... Video output: 75 ohms
  Audio output: Less than 1 kilo-ohms
Effective output
Front both channels driven .... 10 W + 10 W
(THD. 1 % 1 kHz, 8 ohms)
Built-in speaker system .... 16 cm (6-5/16 in) full range x 2

Tuner section

Circuit type .... Video signal detection:
PLL full synchronous detection
PLL digital synthesizer system
Audio multiplex: BTSC system
Reception channels .... VHF; CH2~CH13, UHF; CH14~CH69
CATV (STANDARD, IRC or HRC)
CATV 1-125 CH
Antenna terminals .... Antenna terminal, 75 ohms UNBAL,
F-type connector (VHF, UHF MIXED)

Electrical section, miscellaneous

Power requirements .... 120 V AC, 60 Hz
Power consumption
  At time of shipment .... 325 W, 600 VA (CSA)
  With digital tuner installed .... 360 W, 660 VA (CSA)
External dimensions
  PRO-610HD .... 1378 (W) x 675 (D) x 1351 (H) mm
  54-1/4 (W) x 26-9/16 (D) x 53-3/16 (H) inch
  PRO-510HD .... 1268 (W) x 640 (D) x 1289 (H) mm
  49-15/16 (W) x 25-3/16 (D) x 50-3/4 (H) inch

Weight of main unit
  PRO-610HD .... 141 kg (311 lb 9 oz)
  PRO-510HD .... 127 kg (280 lb 6 oz)

Wireless remote control unit

Operation system .... Infrared remote control system
Power source .... Two DURACELL ®"AA" MN1500 1.5 V
ALKALINE dry cell batteries
Dimensions .... 66 (W) x 24.6 (H) x 226.5 (D) mm
2-19/32 (W) x 31/32 (H) x 8-29/32 (D) inch
Weight .... 170 g (4 oz) (without batteries)

Accessories

Operating instructions 1
Warranty card 1
Remote control unit 1
DURACELL® "AA" MN1500 1.5V
Alkaline dry cell batteries 2
Protective screen 1
Panel frame 2
Side frame cover 2
Frame cover 2
Panel frame attaching screw 10 (PRO-610HD)
6 (PRO-510HD)

NOTE:
Specifications and design are subject to possible modifications without notice due to improvements.

■ SPECIFICATIONS for SD-582HD5 and SD-532HD5

Display and amplifier section

Reception system	American TV standard NTSC system
Screen size	58" (SD-582HD5) 53" (SD-532HD5)
CRT	7" High focus CRT x 3
Brightness (White peak)	480 Foot-Lambert (SD-582HD5) 580 Foot-Lambert (SD-532HD5) [White window signal input contrast Max.] without protective screen
Horizontal resolution	More than 1000 lines (SD-582HD5) More than 1000 lines (SD-532HD5) [Input digital test pattern (1000 lines resolution)]
Input terminals	4 video inputs 4 S-VIDEO input jacks (Y/C separate INPUT) 2 COMPONENT VIDEO INPUT jacks (Y, P_B, P_R) 4 audio inputs Mini D-sub 15 pin INPUT jack (RGB)
Output terminals	MONITOR
Input terminal signal ratings	
Input signal	
Video signal:	
Composite and S-VIDEO (Y):	1.0 Vp-p (75 ohms load)
COMPONENT (Y):	1.0 Vp-p (75 ohms load)
(P_B, P_R):	0.7 Vp-p (75 ohms load)
Mini D-sub 15 pin (RGB):	0.7 Vp-p (75 ohms load)
Audio signal (including CENTER):	400mV rms
Input impedance	Video input: 75 ohms Audio input (including CENTER): 22 kilo-ohms or more
Input signal polarity (Video)	Synchronized negative
Output terminal signal ratings	
Output signal	Video signal: 1 Vp-p (75 ohms load) Audio signal: 500 mV rms (100 % modulation)
Output impedance	Video output: 75 ohms Audio output: Less than 1 kilo-ohms
Effective output	
Front both channels driven	10 W + 10 W (THD. 1 % 1 kHz, 8 ohms)
Built-in speaker system	16 cm (6-5/16 in) full range x 2

Tuner section

Circuit type	Video signal detection: PLL full synchronous detection PLL digital synthesizer system Audio multiplex: BTSC system
Reception channels	VHF; CH2~CH13, UHF; CH14~CH69 CATV (STANDARD, IRC or HRC) CATV 1-125 CH
Antenna terminals	Antenna terminal, 75 ohms UNBAL, F-type connector (VHF, UHF MIXED)

Electrical section, miscellaneous

Power requirements	120 V AC, 60 Hz
Power consumption	310 W, 575 VA (CSA)
External dimensions	
SD-582HD5	1378 (W) x 661 (D) x 1351 (H) mm 54-1/4 (W) x 26 (D) x 53-3/16 (H) inch
SD-532HD5	1268 (W) x 626 (D) x 1289 (H) mm 49-15/16 (W) x 24-11/16 (D) x 50-3/4 (H) inch
Weight of main unit	
SD-582HD5	131 kg (289 lb 3 oz)
SD-532HD5	121 kg (267 lb 2 oz)

Wireless remote control unit

Operation system	Infrared remote control system
Power source	Two DURACELL ®"AA" MN1500 1.5 V ALKALINE dry cell batteries
Dimensions	66 (W) x 24.6 (H) x 226.5 (D) mm 2-19/32 (W) x 31/32 (H) x 8-29/32 (D) inch
Weight	170 g (4 oz) (without batteries)

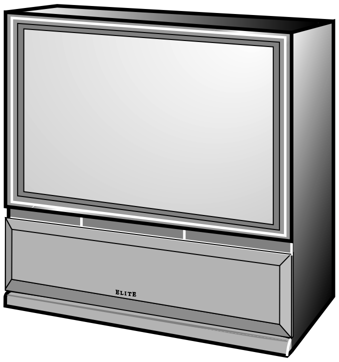
Accessories

Operating instructions	1
Warranty card	1
Remote control unit	1
DURACELL® "AA" MN1500 1.5V Alkaline dry cell batteries	2

NOTE:
Specifications and design are subject to possible modifications without notice due to improvements.

Pioneer

Service Manual



ORDER NO.
ARP3047

PROJECTION MONITOR RECEIVER

PRO-610HD
PRO-510HD
SD-582HD5
SD-532HD5

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model				Power Requirement	Remarks
	PRO-610HD	PRO-510HD	SD-582HD5	SD-532HD5		
KUXC/CA	○	○	○	○	AC120V	
KBXC	—	—	—	○	AC120V	

● This service manual should be used together with the following manual(s):

Model No.	Order No.	Remarks
PRO-610HD	ARP3051	

CONTENTS

1. SAFETY INFORMATION 2
2. EXPLODED VIEWS AND PARTS LIST 6
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM 22
4. PCB CONNECTION DIAGRAM 116
5. PCB PARTS LIST 176

PIONEER CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER ELECTRONIC (EUROPE) N.V. Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

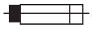
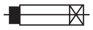
© PIONEER CORPORATION 1999

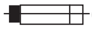
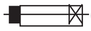
O–ZZR NOV. 1999 Printed in Japan

1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & safety code section 25249.6—Proposition 65

NOTES
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

1.1 SAFETY PRECAUTIONS

NOTICE: Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis or picture tube.
The following precautions should be observed:

1. Do not install, remove, or handle the picture tube in any manner unless shatterproof goggles are worn. People not so equipped should be kept away while picture tubes are handled.
   Keep picture tube away from the body while handling.
2. When service is required, even though the PROJECTION MONITOR RECEIVER an isolation transformer should be inserted between power line and the set in safety before any service is performed.
3. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
4. When service is required, observe the original lead dress.
   Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
5. Always use the manufacturer's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's.
   Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
6. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacturer has become defective, or inadvertently defeated during servicing.

Therefore, the following checks should be performed for the continued protection of the customer and service technician.

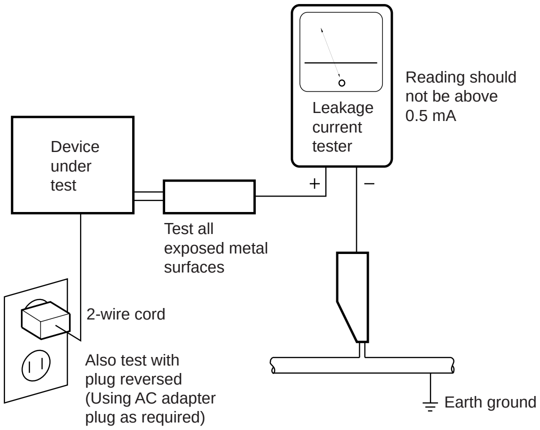
Leakage Current Cold Check

With the AC plug removed from 120V AC 60Hz source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of 0.3MΩ and a maximum resistor reading of 5MΩ. Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into a 120V AC 60Hz outlet (do not use an isolation transformer for this check). Turn the AC power switch on.

Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.


Device under test
Leakage current tester
Reading should not be above 0.5 mA
+
–
Test all exposed metal surfaces
2-wire cord
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.

High Voltage

This set is provided with a X-ray protection for clearly indicating that voltage has increased in excess of a predetermined value. Comply with all notes described in this Service Manual regarding this hold down circuit when servicing, so that this X-ray protection may correctly by operated.

Serviceman Warning

In the status of the black picture (video muting is being applied) when no signal is input, high voltage of this set during operation is less than 30.5kV. In case any component having some relation to the high voltage is replaced, confirm that the high voltage is lower than 30.5kV in the status of the black picture when no signal is input.

To measure H.V. use a high impedance H.V. meter.

Connect (–) to earth and (+) to the FBT anode cable connector.

X-radiation

TUBE: The primary source of X-radiation in this set is the picture tube.

For continued X-radiation protection, the replacement tube must be the same type as the original, PIONEER approved type.

The picture tube (the CRT assy R, G, B) use in this set holds complete guarantee against X-ray radiation when the X-ray is sealed (See page 4). Accordingly, when the current in flowing to the picture tube (CRT assy R, G, B) be sure to perform it by putting the tube into X-ray sealed applied state. Avoid absolutely to flow the current to the picture tube (CRT assy R, G, B) itself. Moreover, when the voltage of the high voltage circuit becomes abnormally a little higher, the picture tube radiates X-rays. Accordingly, when servicing the high voltage circuit be sure to replace as an assembly with the DEFLECTION SERVICE assy in the manner in which has been adjusted to perform normal operation.

1.2 PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, X-radiation, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

1.3 CHARGED SECTION, HIGH VOLTAGE GENERATING POINT AND X-RAY PROTECTION

■ Charged section

The circuit in which the commercial AC power is used as it is without passing through the power supply transformer. If the charged section is touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. In this case, be sure to connect the set via an insulated transformer and supply the current.

■ Charged section (Power supply primary side)

1. The primary side of the AC IN assy
2. AC power cord
3. The primary side of the POWER SUPPLY assy
4. AC power cord for DTV STB
   (PRO-610HD, PRO-510HD Only)

☐ : Part is the charged section.
▨ : Part is the high voltage generating points other than the charged section.

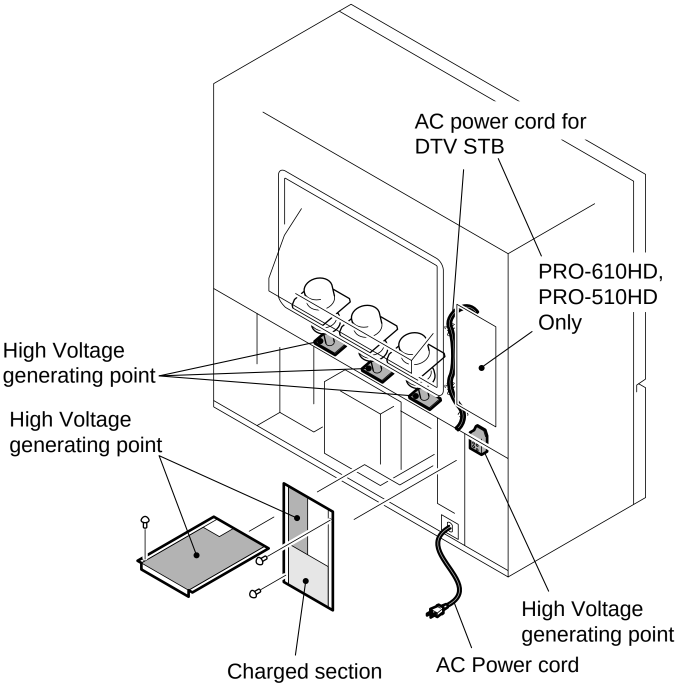

AC power cord for DTV STB
PRO-610HD, PRO-510HD Only
High Voltage generating point
High Voltage generating point
High Voltage generating point
Charged section
AC Power cord

Fig. 1 Charged section and high voltage generating point

■ High voltage generating point

The place where voltage is 100V is generated.

1.Charged seciton
DEFLECTION assy
(including FBT) (30.5kV, 1.2kV, 210V,135V)
2. POWER SUPPLY assy (135V)
3. R. CRT DRIVE assy (10.5kV, 210V)
4. G. CRT DRIVE assy (10.5kV, 210V)
5. B. CRT DRIVE assy (10.5kV, 210V)
6. CRT assy R (CRT service assy R) (30.5kV)
7. CRT assy G (CRT service assy G) (30.5kV)
8. CRT assy B (CRT service assy B) (30.5kV)
9. Focus variable resistor(VR1) (10.5kV)
10. Deflection yokes (L1, L2 and L3) Approx. (1100V at peak)

■ X-ray protection

- Regarding the parts which are relative to radiation of X-rays (There is the danger to radiate X-ray from the individual CRT assy R, G, B), there are notifications of caution in the individual schematic diagrams. Be sure to read them for safety's sake.
- The component parts for X-ray protection are as follows : When the current flows to the CRT assy R, G, B, be sure to perform it with these parts being attached. Protection from the X-ray radiation is maintained in the state in which these parts have been installed to the CRT assy. R, G, B. Accordingly, never supply current only to the CRT assy R, G, B.
  Moreover, the anode voltage of the CRT assy R, G, B should always be kept not higher than the predetermined value (in the minimum brightness and picture state when non signal input is less than 30.5kV). Be sure to drive the CRT assy R, G, B by using a completely functional DEFLECTION assy which have been adjusted completely in the combined state. (When the voltage abnormally becomes high, the X-ray protection circuit will operate.)

1. CRT assy R, G, B (Do not dismantle CRT assemblies under any circumastances)
2. Each Lens assy

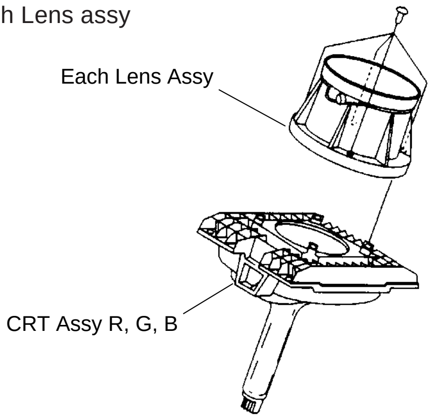
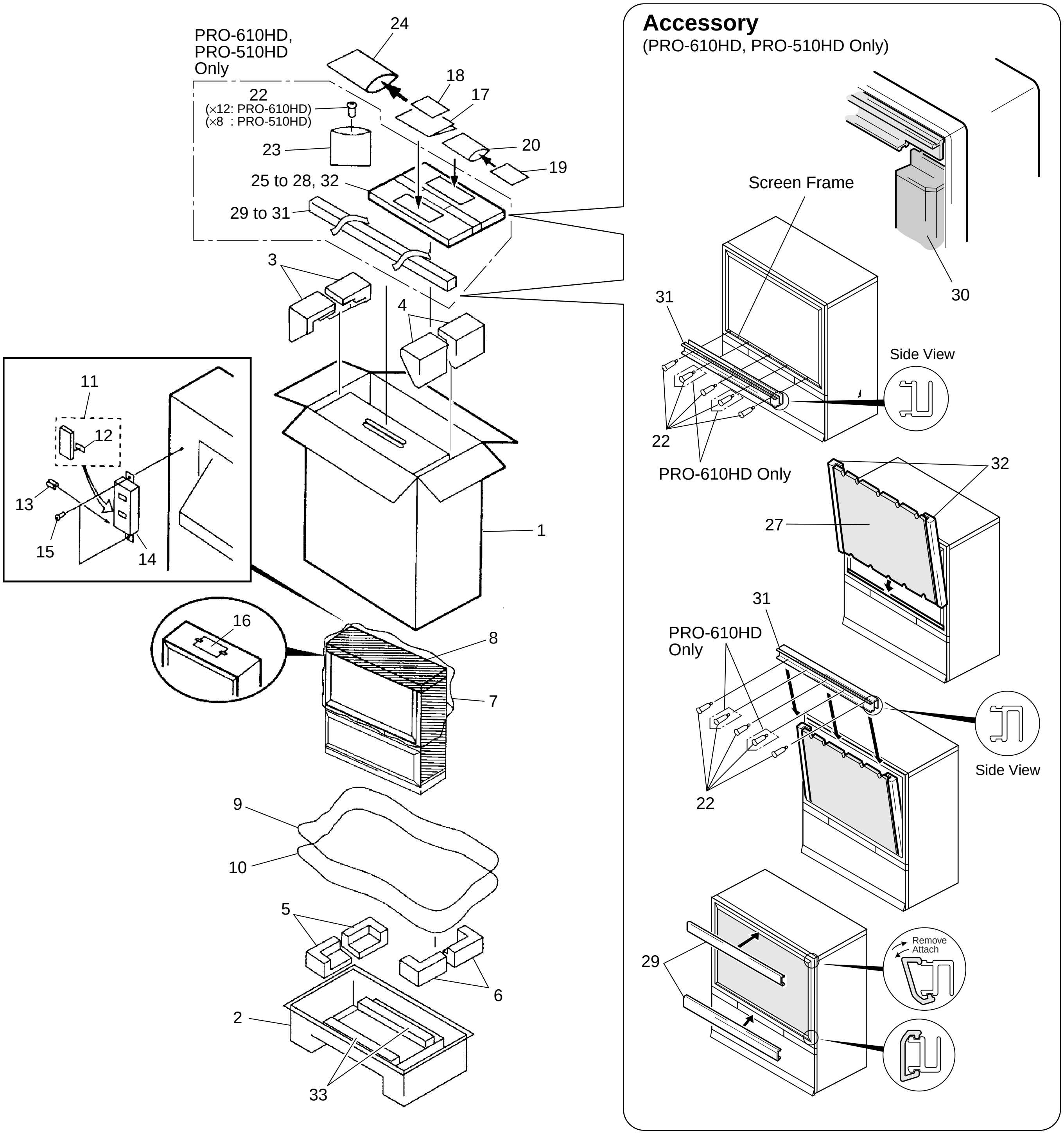


Fig. 2 Component parts for X-ray protection

2. EXPLODED VIEWS AND PARTS LIST

NOTES :
- *Parts marked by " NSP " are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by ☆ are important parts which relate in X-rays radiation. If any of these parts need to be replaced, always replace with specified parts.*
- *Screws adjacent to ▼ mark on the product are used for disassembly.*

2.1 PACKING


PRO-610HD,
PRO-510HD
Only
24
18
17
22
(×12: PRO-610HD)
(×8 : PRO-510HD)
23
20
19
25 to 28, 32
29 to 31
3
4
11
12
13
15
14
1
16
8
7
9
10
5
6
2
33
Accessory
(PRO-610HD, PRO-510HD Only)
Screen Frame
31
30
Side View
22
PRO-610HD Only
32
27
31
PRO-610HD
Only
Side View
22
29
Remove
Attach

(1) PACKING PARTS LIST

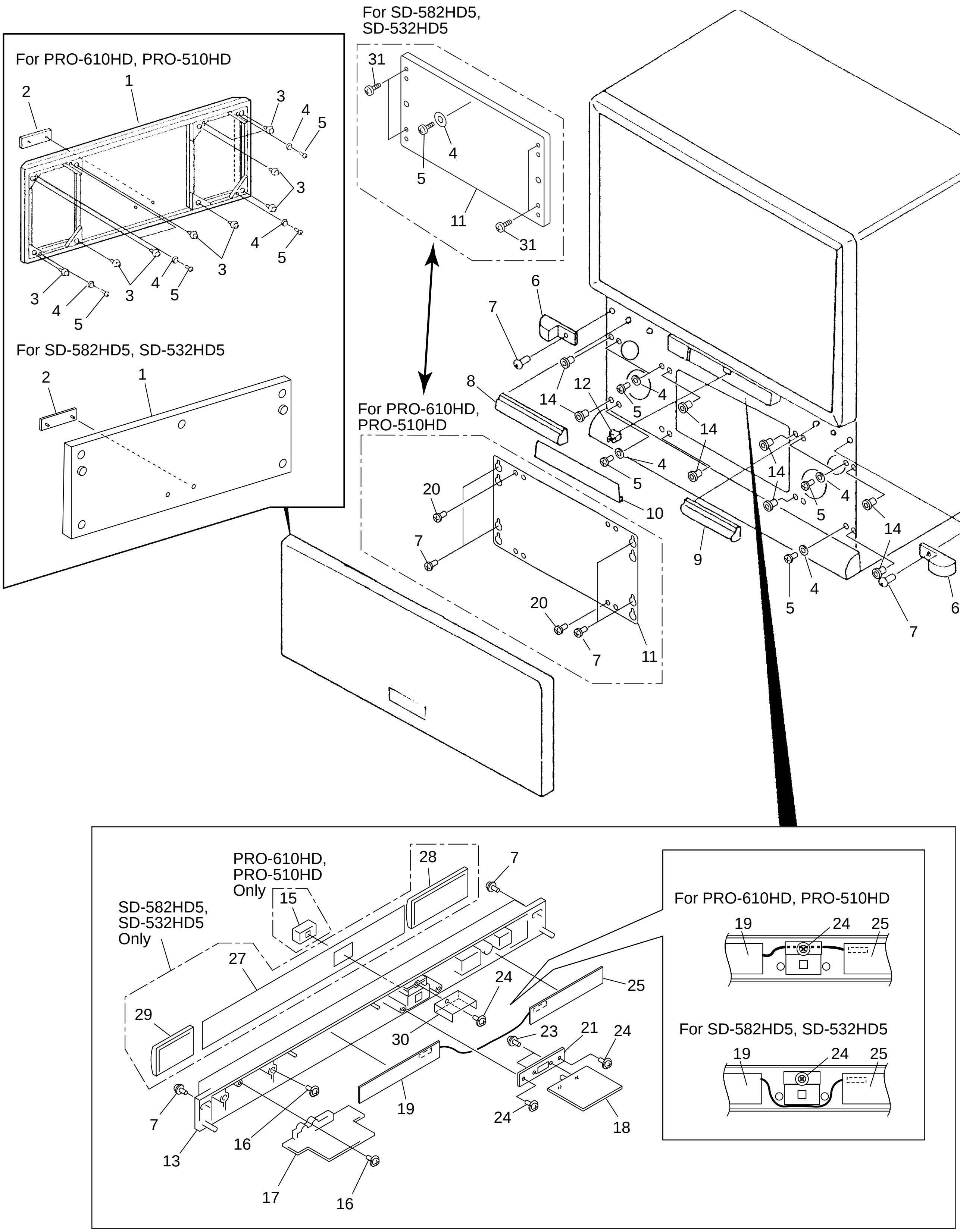
Mark	No.	Description	Part No.
	1	Upper Carton	See Contrast table (2)
	2	Under Carton	See Contrast table (2)
	3	Upper Pad L	AHA2253
	4	Upper Pad R	AHA2254
	5	Under Pad L	AHA2255
	6	Under Pad R	AHA2256
NSP	7	Vinyl Sheet Upper	See Contrast table (2)
NSP	8	Packing Sheet	See Contrast table (2)
NSP	9	Packing Sheet Under	See Contrast table (2)
	10	Vinyl Sheet Under	See Contrast table (2)
	11	Remote Control Unit	See Contrast table (2)
	12	Battery Cover	AZN2401
NSP	13	Alkarine Dry Cell Battery (LR6,AA)	AEX1018
	14	CU Packing Case	AHC1032
	15	Special Screw	ABA1239
	16	CONV. Attention Card	See Contrast table (2)
	17	Operating Instructions	See Contrast table (2)
NSP	18	Caution Card	ARM1057
NSP	19	Warranty Card	See Contrast table (2)
NSP	20	Poly Bag	AHG1285
	21	....	
	22	Special Screw (Panel Frame Attaching Screw)	See Contrast table (2)
NSP	23	Wrapper Bag	See Contrast table (2)
NSP	24	Literature Bag	AHG1222
	25	Panel Case	See Contrast table (2)
	26	....	
	27	Contrast Screen	See Contrast table (2)
	28	Acrylic Caution Card	See Contrast table (2)
	29	Frame Cover H	See Contrast table (2)
	30	Frame Cover V Assy	See Contrast table (2)
	31	Panel Frame H	See Contrast table (2)
	32	Panel Frame V	See Contrast table (2)
NSP	33	Under Cushion A	See Contrast table (2)

(2) CONTRAST TABLE

PRO-610HD, PRO-510HD, SD-582HD5 and SD-532HD5 are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.					Remarks
			PRO-610HD KUXC/CA	PRO-510HD KUXC/CA	SD-582HD5 KUXC/CA	SD-532HD5 KUXC/CA	SD-532HD5 KBXC	
	1	Upper Carton	AHD3045	AHD3046	AHD3049	AHD3050	AHD3050	
	2	Under Carton	AHD3047	AHD3048	AHD3047	AHD3048	AHD3048	
NSP	7	Vinyl Sheet Upper	AHG1288	AHG1095	AHG1288	AHG1095	AHG1095	
NSP	8	Packing Sheet	AHG1230	AHG1120	AHG1230	AHG1120	AHG1120	
NSP	9	Packing Sheet Under	AHG1290	AHG1235	AHG1290	AHG1235	AHG1235	
	10	Vinyl Sheet Under	AHG1289	AHG1234	AHG1289	AHG1234	AHG1234	
	11	Remote Control Unit (CU-SD110)	AXD1448 (CU-SD110)	AXD1448 (CU-SD110)	AXD1449 (CU-SD111)	AXD1449 (CU-SD111)	AXD1449 (CU-SD111)	
	16	CONV. Attention Card	ARM1173	ARM1173	ARM1174	ARM1174	ARM1174	
	17	Operating Instructions (English)	ARB1527	ARB1527	ARB1528	ARB1528	ARB1528	
NSP	19	Warranty Card	ARY1026	ARY1026	ARY1050	ARY1050	Not used	
NSP	20	Poly Bag	AHG1285	AHG1285	AHG1285	AHG1285	Not used	
	22	Special Screw	ABA1280	ABA1280	Not used	Not used	Not used	
NSP	23	Wrapper Bag	AHG1076	AHG1076	Not used	Not used	Not used	
	25	Panel Case	AHB1215	AHB1216	Not used	Not used	Not used	
	27	Contrast Screen	AAK2749	AAK2750	Not used	Not used	Not used	
	28	Acrylic Caution Card	ARH1167	ARH1167	Not used	Not used	Not used	
	29	Frame Cover H	AAP1613	AAP1614	Not used	Not used	Not used	
	30	Frame Cover V Assy	AAP1617	AAP1619	Not used	Not used	Not used	
	31	Panel Frame H	AAP1629	AAP1630	Not used	Not used	Not used	
	32	Panel Frame V	AND1169	AND1167	Not used	Not used	Not used	
NSP	33	Under Cushion A	AHA2258	AHA2260	AHA2258	AHA2260	AHA2260	

2.2 FRONT VIEW (1/2)


For PRO-610HD, PRO-510HD
1
2
3
4
5
3
4
5
3
4
5
3
3
4
5
For SD-582HD5, SD-532HD5
2
1
For SD-582HD5,
SD-532HD5
31
4
5
11
31
6
7
8
14
12
4
5
14
4
5
14
4
5
14
10
9
5
4
6
7
For PRO-610HD,
PRO-510HD
20
7
20
7
11
PRO-610HD,
PRO-510HD
Only
15
28
7
SD-582HD5,
SD-532HD5
Only
27
29
24
25
30
23
21
24
19
24
18
7
13
16
17
16
For PRO-610HD, PRO-510HD
19
24
25
For SD-582HD5, SD-532HD5
19
24
25

(1) FRONT VIEW (1/2) PARTS LIST

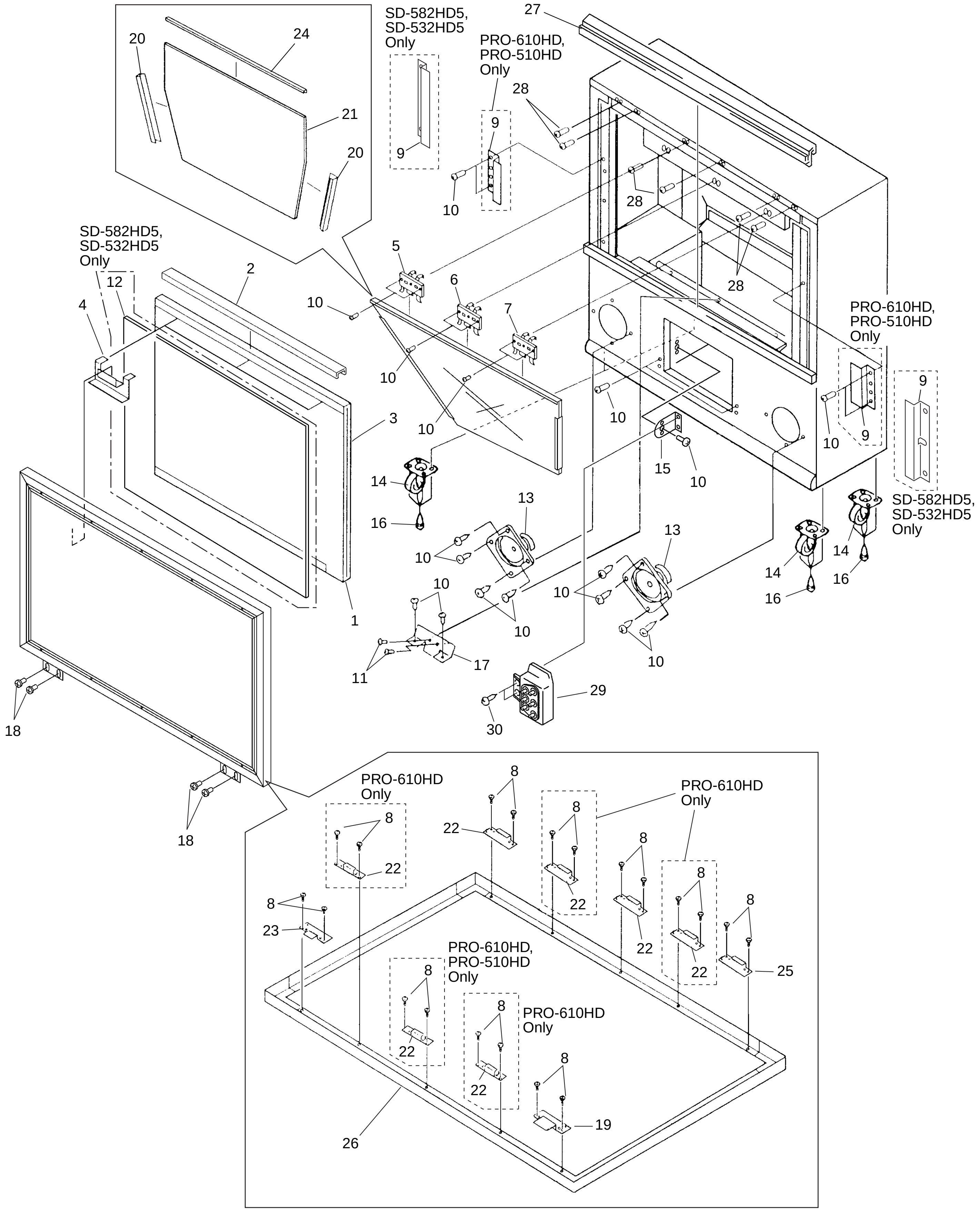
Mark	No.	Description	Part No.
	1	Grille	See Contrast table (2)
	2	Badge	See Contrast table (2)
NSP	3	Catcher A	See Contrast table (2)
	4	Magic Tape	AEC1349
	5	Screw	ABA1271
	6	Side Cover	See Contrast table (2)
	7	Special Screw	ABA1240
	8	Side Panel Assy L	See Contrast table (2)
	9	Side Panel Assy R	See Contrast table (2)
	10	Door Assy	See Contrast table (2)
	11	Blind Plate	See Contrast table (2)
	12	Catcher F2M	AEC1609
	13	Front Panel Assy	See Contrast table (2)
	14	Catch B	See Contrast table (2)
	15	Power Knob	See Contrast table (2)
	16	Screw	ABZ40P080FZK
	17	FRONT INPUT Assy	See Contrast table (2)
	18	POWER SW Assy	AWZ6467
	19	FRONT CONTROL Assy	AWZ6462
	20	Screw	See Contrast table (2)
NSP	21	Switch Holder	ANG2313
	22	....	
	23	Screw	AMZ30P060FZK
	24	Screw	APZ30P080FZK
	25	LED DPO Assy	See Contrast table (2)
	26	....	
	27	Control Sheet	See Contrast table (2)
	28	Indicator Panel L	See Contrast table (2)
	29	Indicator Panel R	See Contrast table (2)
NSP	30	Front Shield	ANK1502
	31	Special Screw	See Contrast table (2)

(2) CONTRAST TABLE

PRO-610HD, PRO-510HD, SD-582HD5 and SD-532HD5 are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.				Remarks
			PRO-610HD	PRO-510HD	SD-582HD5	SD-532HD5	
	1	Grille	AMM3003	AMM3004	AMR3173	AMR3174	
	2	Badge	AAM1081	AAM1081	AAM1088	AAM1088	
	3	Catcher A	ANZ-241	ANZ-241	Not used	Not used	
	6	Side Cover	AMR3107	AMR3107	Not used	Not used	
	8	Side Panel Assy L	AMB2662	AMB2664	Not used	Not used	
	9	Side Panel Assy R	AMB2663	AMB2665	Not used	Not used	
	10	Door Assy	AAN1461	AAN1461	AAN1459	AAN1457	
	11	Blind Plate	AMM2933	AMM2933	AMM3009	AMM3009	
	13	Front Panel Assy	AMB2666	AMB2666	Not used	Not used	
	13	Control Panel	Not used	Not used	AMB2657	AMB2657	
	14	Catch B	AEC1507	AEC1507	ANZ–242	ANZ–242	
	15	Power Knob	AAD4105	AAD4105	Not used	Not used	
	17	FRONT INPUT Assy	AWZ6466	AWZ6466	AWZ6471	AWZ6471	
	20	Screw	ABA1239	ABA1239	Not used	Not used	
	25	LED DPO Assy	AWZ6463	AWZ6463	AWZ6470	AWZ6470	
	27	Control Sheet	Not used	Not used	AMB2751	AMB2751	
	28	Indicator Panel L	Not used	Not used	AMB2752	AMB2752	
	29	Indicator Panel R	Not used	Not used	AMB2753	AMB2753	
	31	Special Screw	Not used	Not used	ABA1249	ABA1249	

2.3 FRONT VIEW (2/2)


SD-582HD5,
SD-532HD5
Only
PRO-610HD,
PRO-510HD
Only
PRO-610HD
Only
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30

(1) FRONT VIEW (2/2) PARTS LIST

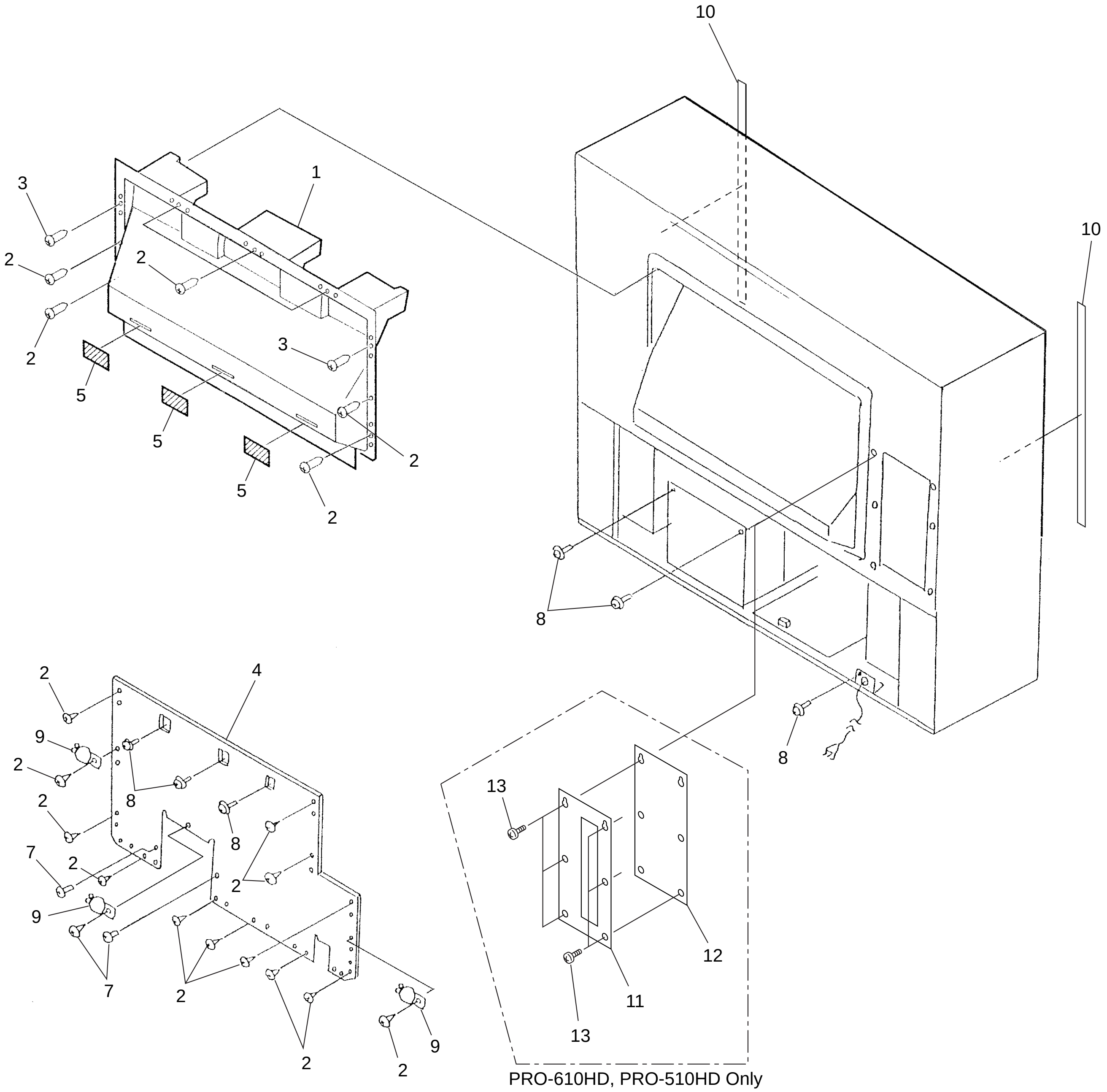
Mark	No.	Description	Part No.
	1	Lenticular Sheet	See Contrast table (2)
	2	Screen Holder Top	See Contrast table (2)
	3	Fresnel	See Contrast table (2)
NSP	4	Upper Cabinet Metal	See Contrast table (2)
NSP	5	Mirror Upper Stay L	ANG2004
NSP	6	Mirror Upper Stay C	ANG2006
NSP	7	Mirror Upper Stay R	ANG2005
	8	Screw	See Contrast table (2)
NSP	9	Screen Side Fitting	See Contrast table (2)
	10	Special Screw	ABA1240
	11	Screw	ACZ40P080FMC
	12	Contrast Screen	See Contrast table (2)
	13	Cone Speaker	APV1021
	14	Caster	AMR2547
NSP	15	VR Holder	ANG1956
	16	Special Screw	ABA1273
NSP	17	CRT Front Holder	ANG2118
	18	Screw M5	ABA1189
NSP	19	Under Screen Metal B	See Contrast table (2)
	20	Mirror Frame V	See Contrast table (2)
	21	Mirror	See Contrast table (2)
NSP	22	Upper Screen Metal B	See Contrast table (2)
NSP	23	Under Screen Metal A	See Contrast table (2)
	24	Mirror Frame H	See Contrast table (2)
NSP	25	Upper Screen Metal A	See Contrast table (2)
	26	Screen Frame Assy	See Contrast table (2)
	27	Screen Holder Low	See Contrast table (2)
	28	Screw	BYC35P160FZK
⚠	29	Focus VR (VR1)	ACX1096
	30	Screw	BBZ30P080FZK

(2) CONTRAST TABLE

PRO-610HD, PRO-510HD, SD-582HD5 and SD-532HD5 are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.				Remarks
			PRO-610HD	PRO-510HD	SD-582HD5	SD-532HD5	
	1	Lenticular Sheet	AMR3184	AMR3185	AMR3178	AMR3179	
	2	Screen Holder Top	ANG2369	ANG2370	ANG2363	ANG2364	
	3	Fresnel	AMR3186	AMR3187	AMR3180	AMR3181	
	4	Upper Cabinet Metal	ANG2000	ANG2000	ANG2358	ANG2358	
	8	Screw	BYC40P160FMC	BYC40P160FMC	BYC40P140FZK	BYC40P140FZK	
	9	Screen Side Fitting	ANG1993	ANG1993	ANG2366	ANG2362	
	12	Contrast Screen	Not used	Not used	AAK2747	AAK2748	
NSP	19	Under Screen Metal B	ANG2009	ANG2009	ANG2361	ANG2361	
	20	Mirror Frame V	ANG2373	ANG2374	ANG2373	ANG2374	
	21	Mirror	AMR3188	AMR3189	AMR3188	AMR3189	
NSP	22	Upper Screen Metal B	ANG2002	ANG2002	ANG2360	ANG2360	
NSP	23	Under Screen Metal A	ANG2003	ANG2003	ANG2361	ANG2361	
	24	Mirror Frame H	ANG2371	ANG2372	ANG2371	ANG2372	
NSP	25	Upper Screen Metal A	ANG2001	ANG2001	ANG2359	ANG2359	
	26	Screen Frame Assy	AAP1611	AAP1612	AAP1607	AAP1608	
	27	Screen Holder Low	AAP1621	AAP1622	AAP1609	AAP1610	

2.4 REAR VIEW (1/2)


10
3
1
10
2
2
2
2
3
5
5
5
2
2
8
2
4
9
2
2
8
8
7
2
2
9
7
2
2
2
9
13
12
11
13
8
PRO-610HD, PRO-510HD Only

(1) REAR VIEW (1/2) PARTS LIST

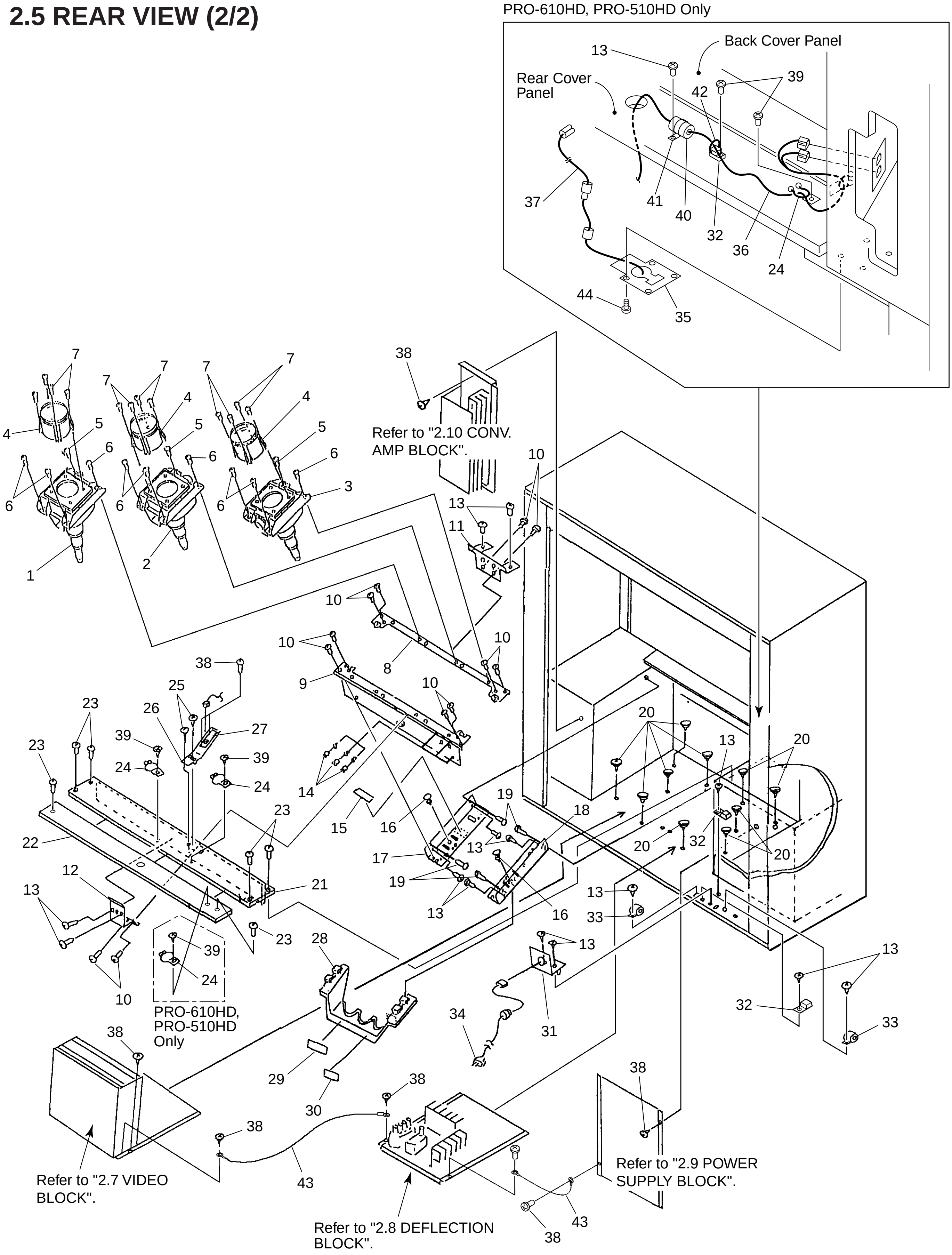
Mark	No.	Description	Part No.
	1	Mirror Case 51	AME2296
	2	Screw	ABA1240
	3	Screw	PYC40T140FZB
	4	Rear Cover	AMM2999
	5	Blind Sheet	AEC1622
	6	....	
	7	Screw	ABZ30P100FZK
	8	Screw	ABA1269
NSP	9	Cabinet Wire Holder	AEC1263
	10	Screen Cushion	See Contrast table (2)
	11	Rear Cover (DTV)	See Contrast table (2)
	12	Rear Cover Sheet	See Contrast table (2)
	13	Screw	PMB40P250FZB

(2) CONTRAST TABLE

PRO-610HD, PRO-510HD, SD-582HD5 and SD-532HD5 are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.				Remarks
			PRO-610HD	PRO-510HD	SD-582HD5	SD-532HD5	
	10	Screen Cushion	AEC1830	AEC1831	AEC1845	AEC1844	
	11	Rear Cover (DTV)	AMM3000	AMM3000	Not used	Not used	
	12	Rear Cover Sheet	AMR3190	AMR3190	Not used	Not used	

2.5 REAR VIEW (2/2)


PRO-610HD, PRO-510HD Only
Back Cover Panel
Rear Cover Panel
13
39
42
37
41
40
32
36
24
44
35
7
4
5
6
3
1
2
38
Refer to "2.10 CONV. AMP BLOCK".
10
13
11
8
9
25
26
27
23
39
24
14
15
16
19
18
17
20
22
12
21
28
PRO-610HD, PRO-510HD Only
29
30
31
34
32
33
Refer to "2.7 VIDEO BLOCK".
43
Refer to "2.8 DEFLECTION BLOCK".
Refer to "2.9 POWER SUPPLY BLOCK".

(1) REAR VIEW (2/2) PARTS LIST

Mark	No.	Description	Part No.
☆	1	CRT Service Assy B	See Contrast table (2)
☆	2	CRT Service Assy G	See Contrast table (2)
☆	3	CRT Service Assy R	See Contrast table (2)
☆	4	Lens Assy	See Contrast table (2)
	5	Screw	FBT40P120FZK
	6	Screw	ABA1168
	7	Screw	AMZ40P080FZK
NSP	8	CRT Front Frame	See Contrast table (2)
NSP	9	CRT Rear Frame	See Contrast table (2)
	10	Screw	ACZ40P080FMC
NSP	11	CRT Front Holder	ANG2118
NSP	12	CRT Rear Holder	ANG2119
	13	Screw	ABA1240
	14	Cord Holder	AEC1257
NSP	15	Tube Label	AAX2497
	16	Rivet	AEC-441
NSP	17	CRT Stand Holder R	ANA1497
NSP	18	CRT Stand Holder L	ANA1496
	19	Screw	PMB50P250FZB
	20	Special Screw	ABA1121
NSP	21	Back Cover Panel	See Contrast table (2)
	22	Rear Cover Panel	AMM3010
	23	Screw	ABA1241
NSP	24	Cabinet Wire Holder	AEC1263
	25	Screw	ABA1279
NSP	26	Fixing Metal	ANG1958
	27	SR Assy	AWZ6465
NSP	28	Tray	AMR2563
NSP	29	Solder Warning Label	AAX2672
NSP	30	Warning Label (KC)	AAX1797

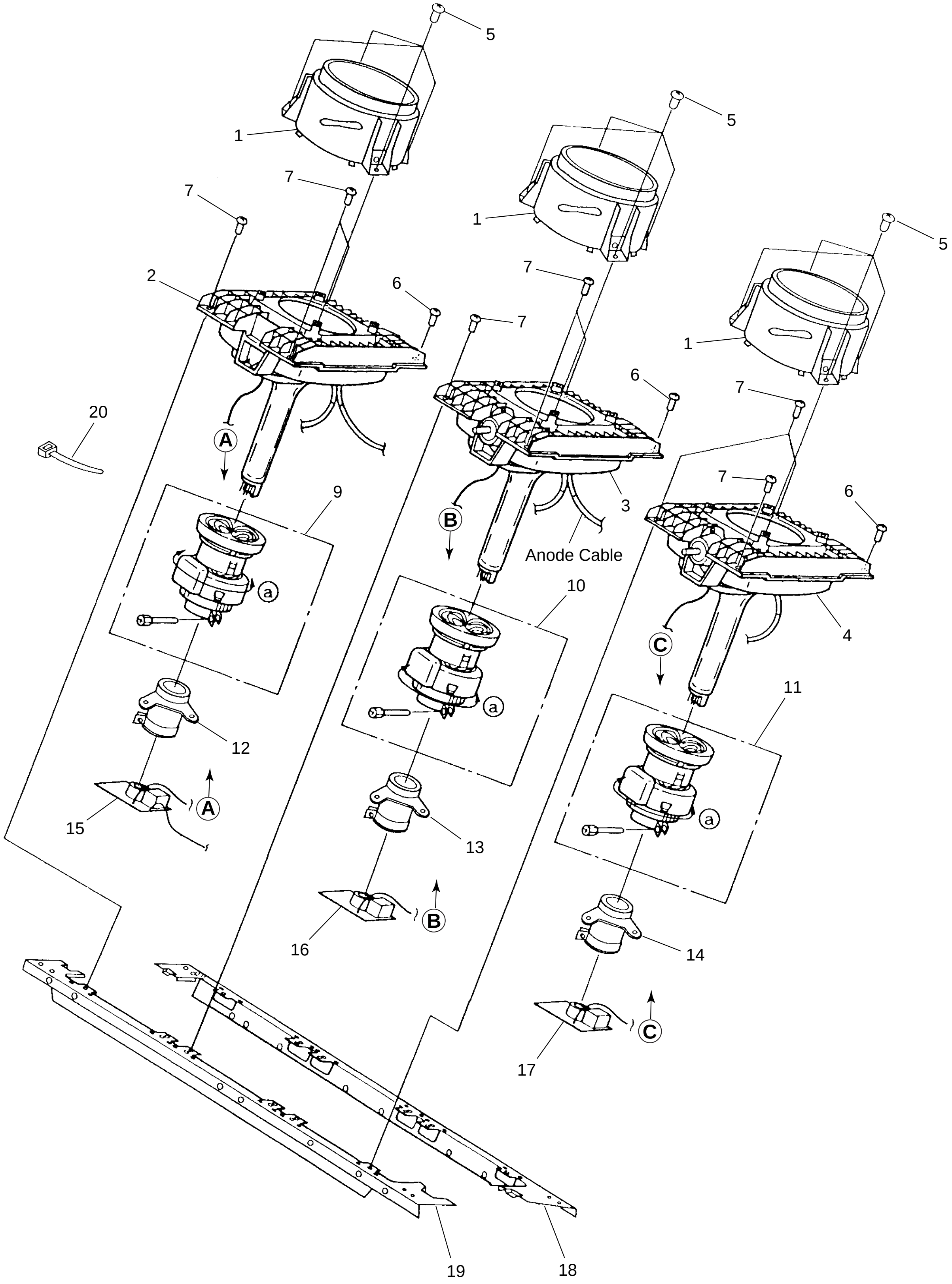
Mark	No.	Description	Part No.
NSP	31	AC Cord Holder A	ANG2307
NSP	32	Bind Holder	AEC1785
	33	Ferrite Core	ATX1033
⚠	34	AC Power Cord	ADG1180
NSP	35	AC Cord Holder B	See Contrast table (2)
	36	Wire Harness C (J14)	See Contrast table (2)
⚠	37	AC Power Cord	See Contrast table (2)
	38	Screw	BBZ30P080FZK
	39	Screw	ABA1271
	40	Ferrite Core	See Contrast table (2)
NSP	41	Nylon Clamp 18N	AEC1789
	42	Nylon Binder	AEC-093
	43	1P Lead Wire (J1)	ADX2505
	44	Screw	PMB40P250FZB

(2) CONTRAST TABLE

PRO-610HD, PRO-510HD, SD-582HD5 and SD-532HD5 are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.				Remarks
			PRO-610HD	PRO-510HD	SD-582HD5	SD-532HD5	
☆	1	CRT Service Assy B	AWY1422	AWY1418	AWY1420	AWY1418	
☆	2	CRT Service Assy G	AWY1413	AWY1417	AWY1417	AWY1417	
☆	3	CRT Service Assy R	AWY1421	AWY1416	AWY1419	AWY1416	
☆	4	Lens Assy	AMR3183	AMR2833	AMR2833	AMR2833	
NSP	8	CRT Front Frame	ANA1613	ANA1614	ANA1613	ANA1614	
NSP	9	CRT Rear Frame	ANA1615	ANA1616	ANA1615	ANA1616	
NSP	21	Back Cover Panel	AMM3001	AMM3002	AMM3001	AMM3002	
NSP	35	AC Cord Holder B	ANG2311	ANG2311	Not used	Not used	
	36	Wire Harness C (J14)	ADX2491	ADX2491	Not used	Not used	
⚠	37	AC Power Cord	ADG1185	ADG1185	Not used	Not used	
	40	Ferrite Core (L9)	ATX1031	ATX1031	Not used	Not used	

2.6 CRT BLOCK


A
B
Anode Cable
a
C
a
A
a
B
C

(1) CRT BLOCK PARTS LIST

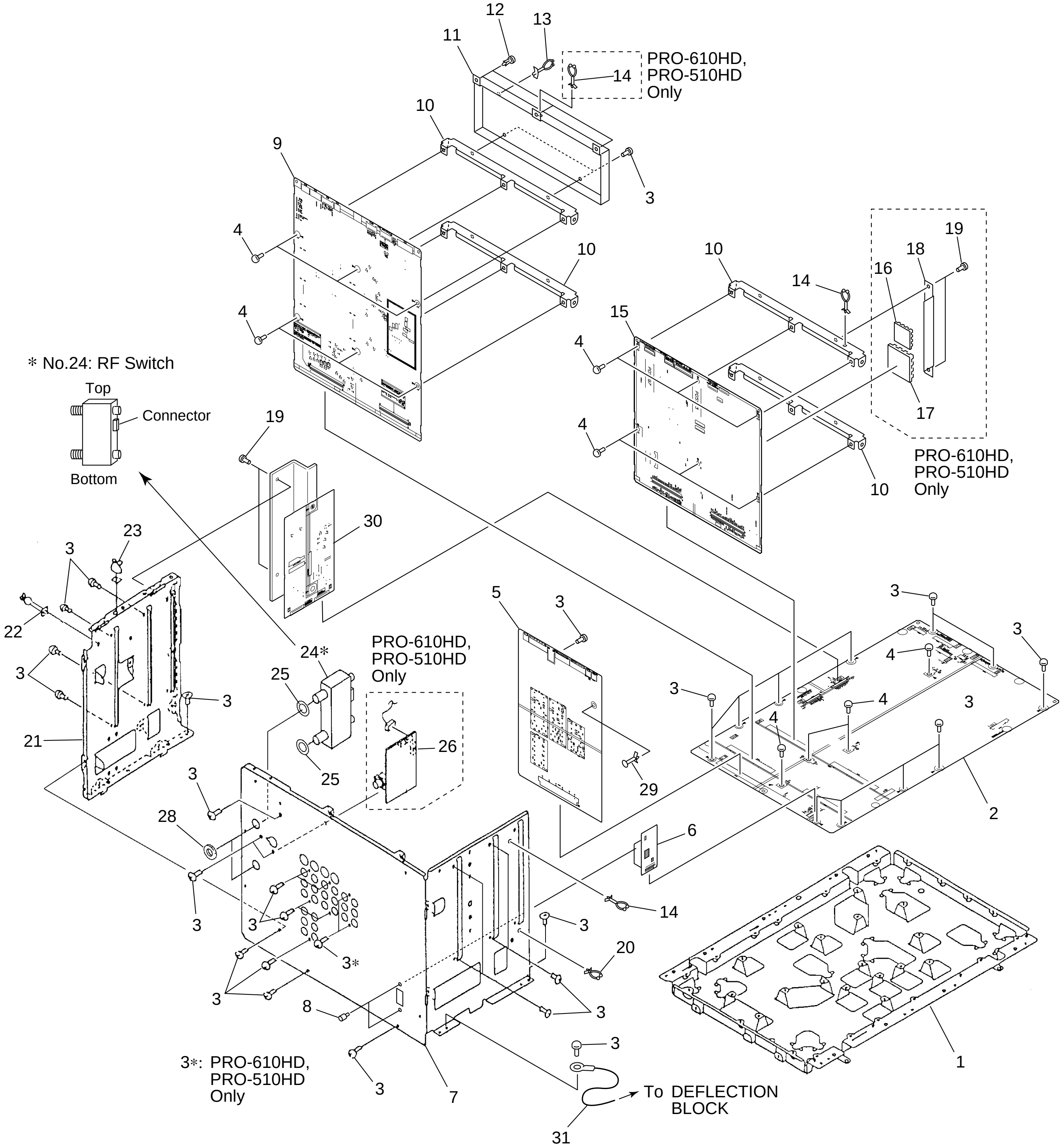
Mark	No.	Description	Part No.
☆	1	Lens Assy	See Contrast table (2)
☆	2	CRT Service Assy R	See Contrast table (2)
☆	3	CRT Service Assy G	See Contrast table (2)
☆	4	CRT Service Assy B	See Contrast table (2)
	5	Screw	AMZ40P080FZK
	6	Screw	FBT40P120FZK
	7	Screw	ABA1168
	8	....	
⚠	9	Deflection Yoke (L1)	ATL1136
⚠	10	Deflection Yoke (L2)	ATL1136
⚠	11	Deflection Yoke (L3)	ATL1136
⚠	12	VM Coil (L4)	ATL1137
⚠	13	VM Coil (L5)	ATL1137
⚠	14	VM Coil (L6)	ATL1137
	15	R. CRT DRIVE Assy	AWZ6457
	16	G. CRT DRIVE Assy	AWZ6458
	17	B. CRT DRIVE Assy	AWZ6459
NSP	18	CRT Rear Frame	See Contrast table (2)
NSP	19	CRT Front Frame	See Contrast table (2)
	20	Nylon Binder	AEC-093

(2) CONTRAST TABLE

PRO-610HD, PRO-510HD, SD-582HD5 and SD-532HD5 are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.				Remarks
			PRO-610HD	PRO-510HD	SD-582HD5	SD-532HD5	
☆	1	Lens Assy	AMR3183	AMR2833	AMR2833	AMR2833	
☆	2	CRT Service Assy R	AWY1421	AWY1416	AWY1419	AWY1416	
☆	3	CRT Service Assy G	AWY1413	AWY1417	AWY1417	AWY1417	
☆	4	CRT Service Assy B	AWY1422	AWY1418	AWY1420	AWY1418	
NSP	18	CRT Rear Frame	ANA1615	ANA1616	ANA1615	ANA1616	
NSP	19	CRT Front Frame	ANA1613	ANA1614	ANA1613	ANA1614	

2.7 VIDEO BLOCK


12
13
11
14
PRO-610HD,
PRO-510HD
Only
10
9
3
19
18
16
4
10
10
14
15
4
4
17
4
10
PRO-610HD,
PRO-510HD
Only
* No.24: RF Switch
Top
Connector
Bottom
19
30
23
3
22
3
5
3
3
4
3
24*
PRO-610HD,
PRO-510HD
Only
25
3
4
3
21
4
26
25
29
3
2
28
6
14
3
3
3
3*
20
3
3
8
3
3
3*: PRO-610HD,
PRO-510HD
Only
3
7
1
To DEFLECTION
BLOCK
31

(1) VIDEO BLOCK PARTS LIST

Mark	No.	Description	Part No.
NSP	1	Video Chassis	ANA1584
	2	VIDEO Assy	See Contrast table (2)
	3	Screw	BBZ30P080FZK
	4	Screw	BBZ30P080FCU
	5	AV I/O Assy	See Contrast table (2)
	6	RGB SW Assy	AWZ6468
	7	Rear Panel	See Contrast table (2)
	8	Hexagon Head Screw	BBA1051
	9	SIGNAL Assy	See Contrast table (2)
NSP	10	PCB Sub Frame	ANG2304
	11	Signal Shield	ANK1629
	12	Rivet	AEC–441
NSP	13	Cable Clip D3S	AEC1782
	14	Cable Clip	AEC1806
	15	SUB VIDEO Service Assy	See Contrast table (2)
NSP	16	IP Heat Sink S	See Contrast table (2)
NSP	17	IP Heat Sink M	See Contrast table (2)
	18	IP Heat Sink Holder	See Contrast table (2)
	19	Screw	See Contrast table (2)
NSP	20	Cable Clip D3M	AEC1783
	21	PCB Side Holder	ANG2305
NSP	22	Lead Clamper M	AEC1611
NSP	23	Cable Clip A	AEC1325
	24	RF Switch	AXF1088
	25	Washer	WAXOF160N100

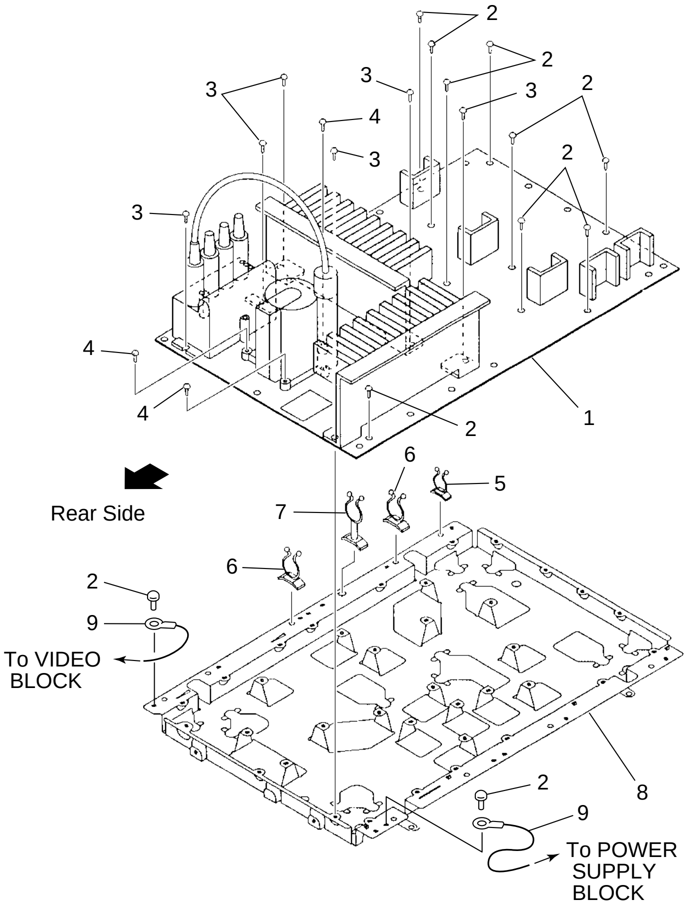
Mark	No.	Description	Part No.
	26	BNC Assy	See Contrast table (2)
	27	Screw	See Contrast table (2)
	28	Nut	BBN1005
NSP	29	Mini Card Spacer	AEC1835
	30	AUDIO Assy	See Contrast table (2)
	31	1P Laed Wire	ADX2505

(2) CONTRAST TABLE

PRO-610HD, PRO-510HD, SD-582HD5 and SD-532HD5 are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.				Remarks
			PRO-610HD	PRO-510HD	SD-582HD5	SD-532HD5	
	2	VIDEO Assy	AWV1799	AWV1799	AWV1804	AWV1804	
	5	AV I/O Assy	AWV1802	AWV1802	AWV1807	AWV1807	
	7	Rear Panel	ANC2336	ANC2336	ANC2337	ANC2337	
	9	SIGNAL Assy	AWV1800	AWV1800	AWV1805	AWV1805	
	15	SUB VIDEO Service Assy	AWV1819	AWV1819	Not used	Not used	
	15	SUB VIDEO Assy	Not used	Not used	AWV1806	AWV1806	
NSP	16	IP Heat Sink S	ANH1572	ANH1572	Not used	Not used	
NSP	17	IP Heat Sink M	ANH1571	ANH1571	Not used	Not used	
	18	IP Heat Sink Holder	AEC1850	AEC1850	Not used	Not used	
	26	BNC Assy	AWZ6464	AWZ6464	Not used	Not used	
	27	Screw	BCZ30P080FZK	BCZ30P080FZK	Not used	Not used	
	30	AUDIO Assy	AWZ6472	AWZ6472	AWZ6469	AWZ6469	

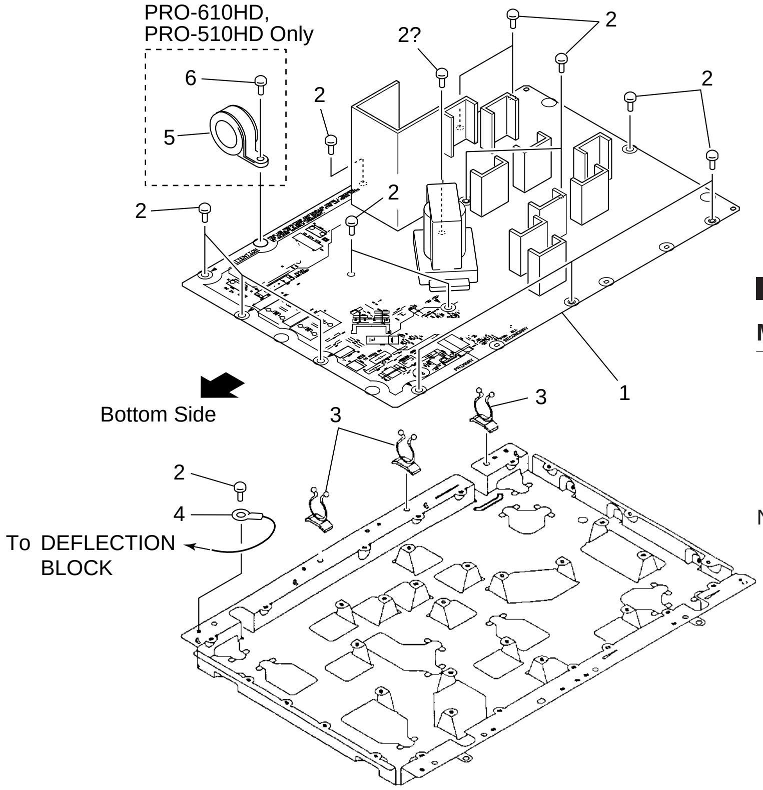
2.8 DEFLECTION BLOCK


2
2
3
3
3
2
4
3
2
3
3
4
4
2
1
Rear Side
6
5
7
6
2
9
To VIDEO BLOCK
2
8
9
To POWER SUPPLY BLOCK

■ DEFLECTION BLOCK PARTS LIST

Mark	No.	Description	Part No.
☆	1	DEFLECTION SERVICE Assy	AWV1809
	2	Screw	BBZ30P080FZK
	3	Screw	ABZ30P100FZK
	4	Screw	VBZ30P200FMC
NSP	5	Cable Clip D3S	AEC1782
NSP	6	Cable Clip D3M	AEC1783
NSP	7	Cable CliP	AEC1325
NSP	8	DF Chassis	ANA1583
	9	1P Laed Wire	ADX2505

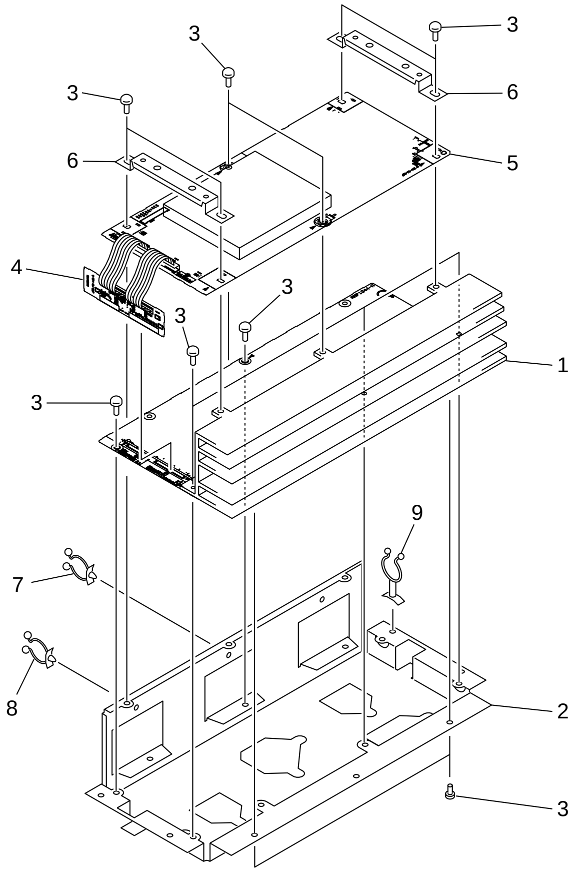
2.9 POWER SUPPLY BLOCK


PRO-610HD, PRO-510HD Only
6
5
2?
2
2
2
2
2
2
1
Bottom Side
3
3
2
4
To DEFLECTION BLOCK

■ POWER SUPPLY BLOCK PARTS LIST

Mark	No.	Description	Part No.
	1	POWER SUPPLY Assy (for PRO-610HD, PRO-510HD)	AWV1795
	1	POWER SUPPLY Assy (for SD-582HD5, SD-532HD5)	AWV1808
	2	Screw	BBZ30P080FZK
NSP	3	Cable Clip D3M	AEC1783
	4	1P Laed Wire	ADX2505
	5	Ferrite Core (PRO-610HD, PRO-510HD only)	ATX1033
	6	Screw (PRO-610HD, PRO-510HD only)	ABZ30P100FZK

2.10 CONV. AMP BLOCK



■ CONV. AMP BLOCK PARTS LIST

Mark	No.	Description	Part No.
	1	CONV. AMP Assy	AWZ6456
NSP	2	CONV. Chassis	ANA1619
	3	Screw	ABZ30P100FMC
	4	CONNECTOR Assy	AWZ6461
	5	DIGITAL CONV. ASSY	AWZ6460
NSP	6	CONV. Holder	ANG2365
NSP	7	Cable Clip D3M	AEC1783
NSP	8	Cable Clip D3S	AEC1782
	9	Cable Clip	AEC1806

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

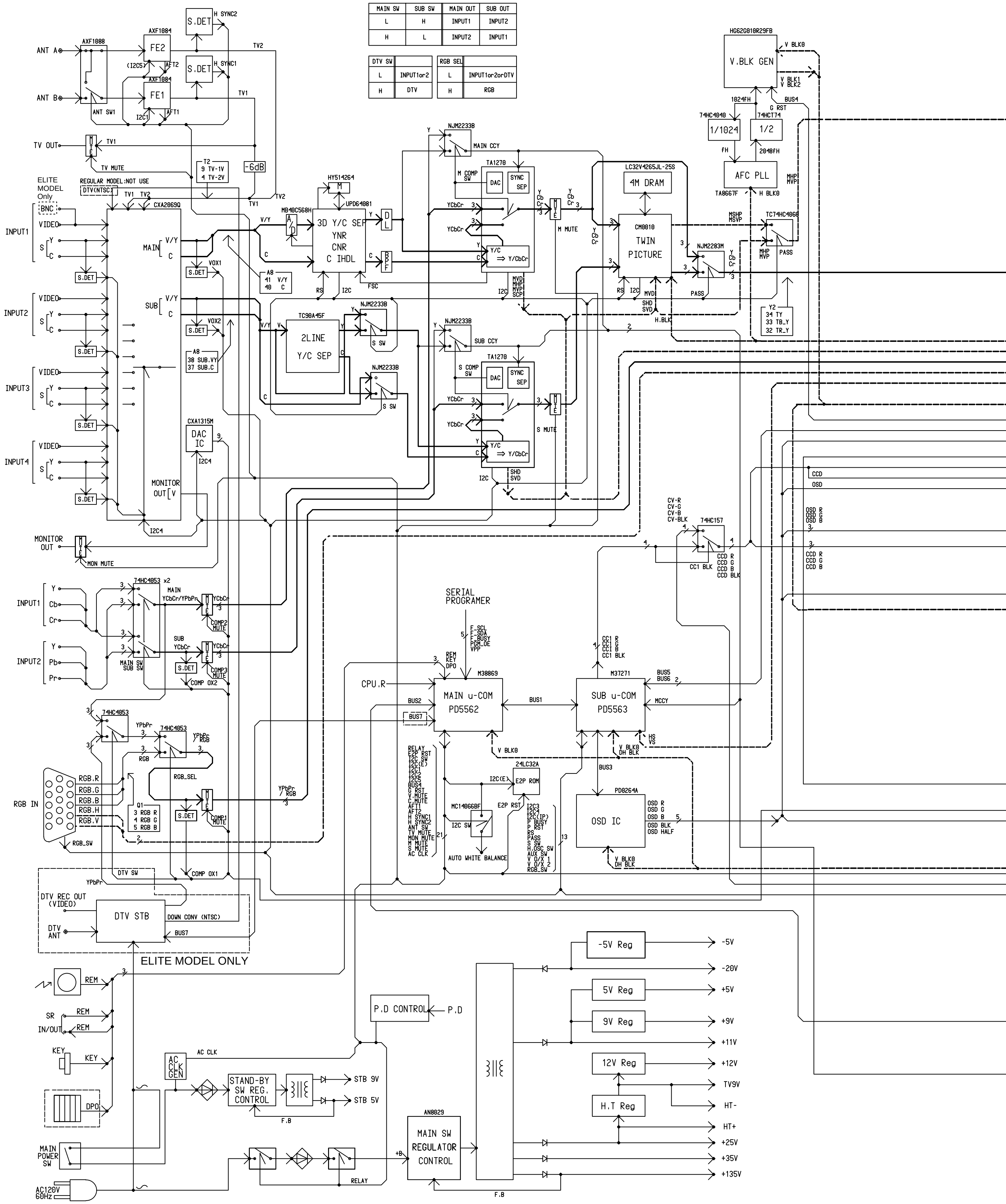
3.1 BLOCK DIAGRAM

3.1.1 OVERALL BLOCK DIAGRAM

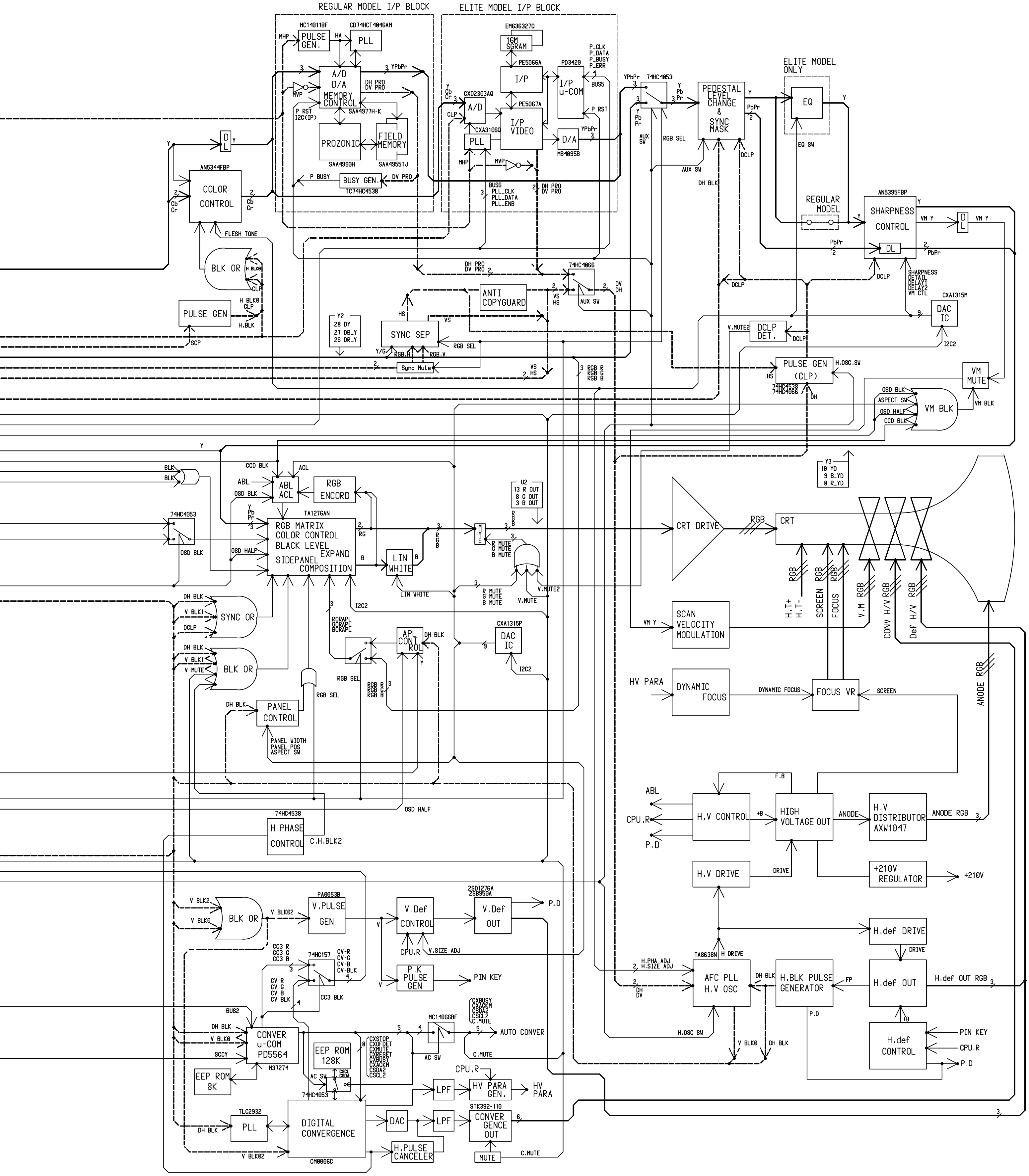
MAIN SW	SUB SW	MAIN OUT	SUB OUT
L	H	INPUT1	INPUT2
H	L	INPUT2	INPUT1

DTV SW	
L	INPUT1or2
H	DTV

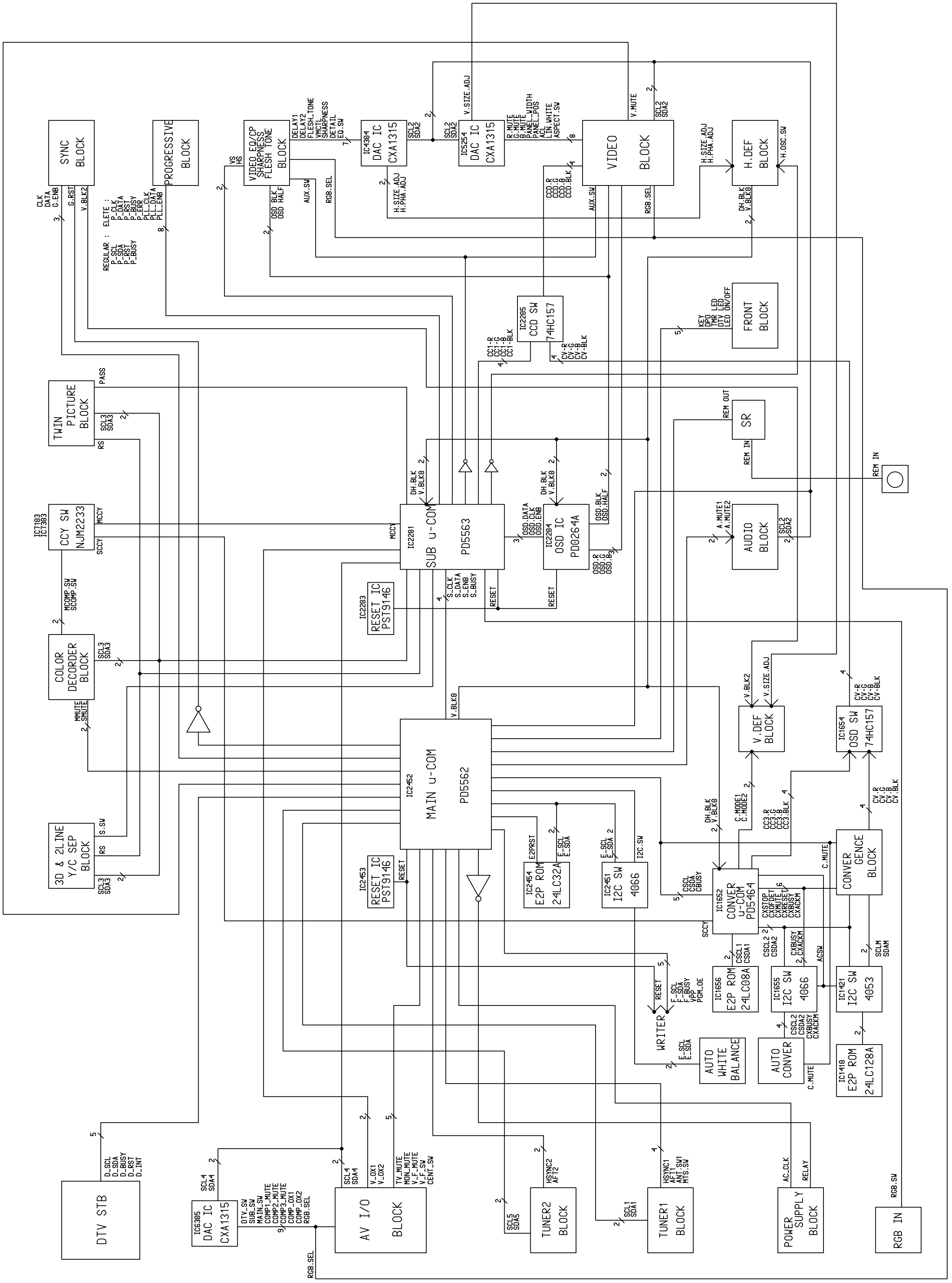
RGB SEL	
L	INPUT1or2orDTV
H	RGB


ANT A
ANT B
AXF1088
ANT SW1
AXF1084
FE2
FE1
I2C5
I2C1
AFT2
AFT1
S.DET
H SYNC2
H SYNC1
TV2
TV1
TV OUT
MUTE
TV MUTE
T2
9 TV-1V
4 TV-2V
-6dB
ELITE MODEL Only
REGULAR MODEL:NOT USE
DTV(NTSC)
BNC
INPUT1
INPUT2
INPUT3
INPUT4
VIDEO
S
Y
C
CXA2069Q
MAIN V/Y C
SUB V/Y C
MONITOR OUT V
I2C4
VOX1
VOX2
A8
41 V/Y
40 C
38 SUB.V/Y
37 SUB.C
CXA1315M
DAC IC
MONITOR OUT
MON MUTE
HY514264
M
UPD64081
MB40C568H
A/D
3D Y/C SEP
YNR
CNR
C IHDL
D/L
BPF
FSC
RS
I2C
TC90A45F
2LINE Y/C SEP
NJM2233B
S SW
NJM2233B
MAIN CCY
SUB CCY
TA1270
M COMP SW
S COMP SW
DAC
SYNC SEP
YCbCr
Y/C ⇒ Y/CbCr
MVD MHP MVP SCP
SHD SVD
M MUTE
S MUTE
LC32V4265JL-25S
4M DRAM
CM0010
TWIN PICTURE
MVDI
H.BLK
NJM2283M
PASS
HG62G010R29FB
V.BLK GEN
V BLK0
V BLK1
V BLK2
1024FH
BUS4
G RST
74HC4040
74HCT74
1/1024
1/2
FH
2048FH
AFC PLL
TA8667F
H BLK0
MHP MVP
MSHP MSVP
TC74HC4066
Y2
34 TY
33 TB_Y
32 TR_Y
CCD
OSD
OSD R
OSD G
OSD B
CCD R
CCD G
CCD B
CV-R
CV-G
CV-B
CV-BLK
74HC157
CC1 BLK
CCD BLK
74HC4053 x2
MAIN YCbCr/YPbPr
SUB YCbCr
MAIN SW
SUB SW
COMP2 MUTE
COMP3 MUTE
COMP OX2
INPUT1 Y Cb Cr
INPUT2 Y Pb Pr
74HC4053
YPbPr
RGB
RGB_SEL
RGB IN
RGB.R
RGB.G
RGB.B
RGB.H
RGB.V
RGB_SW
Q1
3 RGB R
4 RGB G
5 RGB B
COMP1 MUTE
YPbPr RGB
DTV SW
COMP OX1
DTV REC OUT (VIDEO)
DTV ANT
DTV STB
DOWN CONV (NTSC)
BUS7
ELITE MODEL ONLY
SERIAL PROGRAMER
F_SCL
F_SDA
F_BUSY
PGM_OE
VPP
REM
KEY
DPO
CPU.R
BUS2
BUS7
M38869
MAIN u-COM
PD5562
BUS1
M37271
SUB u-COM
PD5563
BUS5
BUS6
MCCY
HS
VS
V BLK0
DH BLK
CC1 R
CC1 G
CC1 B
CC1 BLK
RELAY
E2P RST
I2C SW
I2C(E)
I2C1
I2C2
I2C5
BUS4
G RST
V.MUTE
C.MUTE
AFT1
AFT2
H SYNC1
H SYNC2
ANT SW
TV MUTE
MON MUTE
M MUTE
S MUTE
AC CLK
24LC32A
E2P ROM
I2C(E)
E2P RST
MC14066BF
I2C SW
AUTO WHITE BALANCE
I2C3
I2C4
I2C(IP)
P BUSY
P RST
RS
PASS
S SW
H.OSC SW
AUX SW
V 0/X 1
V 0/X 2
RGB_SW
BUS3
PD0264A
OSD IC
OSD BLK
OSD HALF
REM
SR
IN/OUT
KEY
DPO
MAIN POWER SW
AC120V 60Hz
AC CLK GEN
AC CLK
STAND-BY SW REG. CONTROL
STB 9V
STB 5V
F.B
P.D CONTROL
P.D
AN8029
MAIN SW REGULATOR CONTROL
RELAY
+B
-5V Reg
5V Reg
9V Reg
12V Reg
H.T Reg
-5V
-20V
+5V
+9V
+11V
+12V
TV9V
HT-
HT+
+25V
+35V
+135V

Note : Model names indicated by "ELITE" and "REGULAR" are as follows:
ELITE : PRO-610HD and PRO-510HD, REGULAR : SD-582HD5 and SD-532HD5

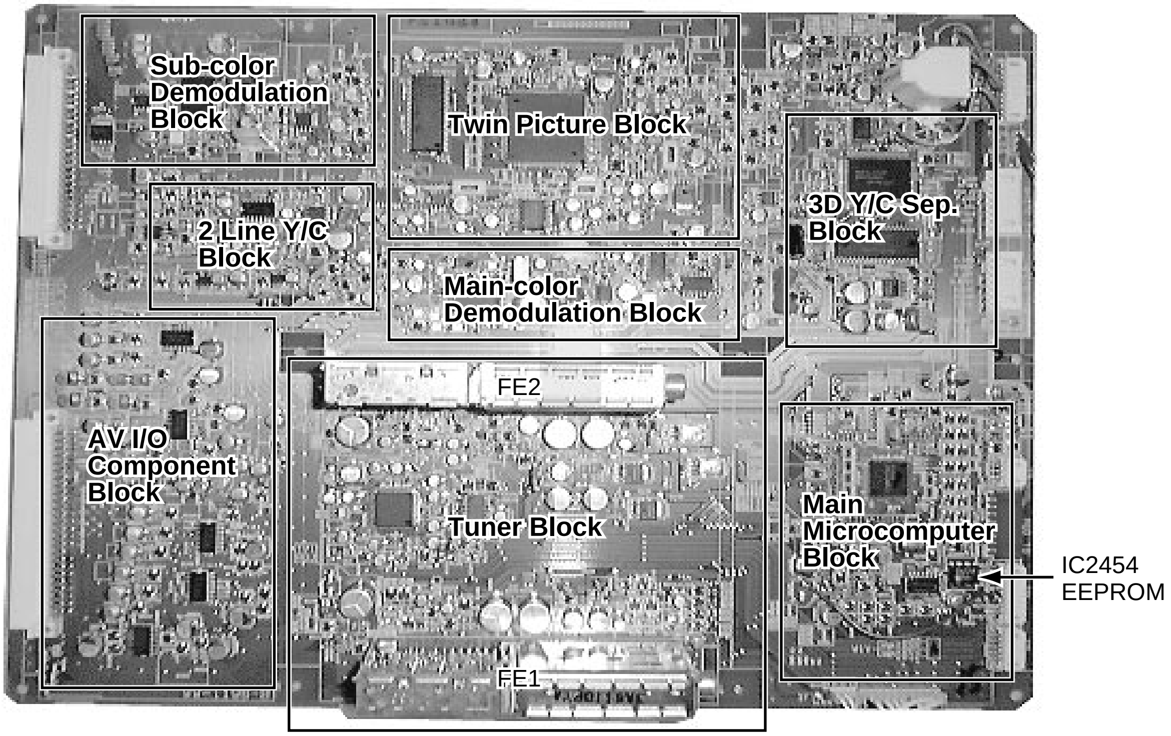

REGULAR MODEL I/P BLOCK
ELITE MODEL I/P BLOCK
MC14011BF
PULSE GEN.
CD74HCT4046AM
PLL
MHP
HA
A/D D/A MEMORY CONTROL
YPbPr
DH PRO
DV PRO
SAA4977H-K
P RST
I2C(IP)
PROZONIC
SAA4990H
FIELD MEMORY
SAA4955TJ
P BUSY
BUSY GEN.
TC74HC4538
DV PRO
EM636327Q
16M SGRAM
PE5066A
I/P
PD3420
I/P u-COM
P_CLK
P_DATA
P_BUSY
P_ERR
BUS5
P RST
CXD2303AQ
A/D
CLP
PE5067A
I/P VIDEO
CXA3106Q
PLL
D/A
MB40958
MVP
BUS6
PLL_CLK
PLL_DATA
PLL_ENB
DH PRO
DV PRO
74HC4053
PEDESTAL LEVEL CHANGE & SYNC MASK
AUX SW
RGB SEL
DCLP
DH BLK
ELITE MODEL ONLY
EQ
EQ SW
REGULAR MODEL
AN5395FBP
SHARPNESS CONTROL
DL
VM Y
PbPr
SHARPNESS
DETAIL
DELAY1
DELAY2
VM CTL
CXA1315M
DAC IC
I2C2
AN5344FBP
COLOR CONTROL
Cb Cr
FLESH TONE
BLK OR
H BLK0
CLP
PULSE GEN
SCP
H.BLK
74HC4066
ANTI COPYGUARD
VS
HS
AUX SW
DV
DH
Y2
28 DY
27 DB_Y
26 DR_Y
SYNC SEP
RGB SEL
Y/G
RGB.H
RGB.V
Sync Mute
RGB R
RGB G
RGB B
V.MUTE2
DCLP DET.
PULSE GEN (CLP)
H.OSC.SW
74HC4538
74HC4066
VM MUTE
VM BLK
OSD BLK
ASPECT SW
OSD HALF
CCD BLK
Y3
10 YD
9 B_YD
8 R_YD
BLK
CCD BLK
ACL
ABL
ABL ACL
RGB ENCORD
OSD BLK
U2
13 R OUT
8 G OUT
3 B OUT
TA1276AN
74HC4053
RGB MATRIX COLOR CONTROL BLACK LEVEL EXPAND SIDEPANEL COMPOSITION
OSD HALF
RG
B
LIN WHITE
MUTE
R MUTE
G MUTE
B MUTE
V.MUTE2
V.MUTE
CRT DRIVE
RGB
CRT
RGB
RGB
RGB
H.T+
H.T-
SCREEN
FOCUS
V.M RGB
CONV H/V RGB
Def H/V RGB
ANODE RGB
I2C2
RGBAPL
GBRAPL
BORAPL
APL CONTROL
DH BLK
CXA1315P
DAC IC
I2C2
DH BLK
V BLK1
DCLP
SYNC OR
DH BLK
V BLK1
V MUTE
BLK OR
RGB SEL
DH BLK
PANEL CONTROL
PANEL WIDTH
PANEL POS
ASPECT SW
VM Y
SCAN VELOCITY MODULATION
HV PARA
DYNAMIC FOCUS
DYNAMIC FOCUS
FOCUS VR
SCREEN
74HC4538
H.PHASE CONTROL
C.H.BLK2
OSD HALF
ABL
CPU.R
P.D
H.V CONTROL
F.B
+B
HIGH VOLTAGE OUT
ANODE
H.V DISTRIBUTOR AXW1047
ANODE RGB
H.V DRIVE
DRIVE
+210V REGULATOR
+210V
V BLK2
V BLK0
BLK OR
V BLK02
PA0053B
V.PULSE GEN
V.Def CONTROL
2SD1276A
2SB950A
V.Def OUT
P.D
CPU.R
V.SIZE ADJ
H.def DRIVE
DRIVE
CC3 R
CC3 G
CC3 B
74HC157
CV-R
CV-G
CV-B
CV-BLK
CV R
CV G
CV B
CV BLK
CC3 BLK
P.K PULSE GEN
PIN KEY
TA8638N
H DRIVE
H.PHA ADJ
H.SIZE ADJ
DH
DV
AFC PLL H.V OSC
DH BLK
H.BLK PULSE GENERATOR
FP
H.def OUT
H.def OUT RGB
P.D
+B
H.def CONTROL
PIN KEY
CPU.R
P.D
H.OSC SW
V BLK0
DH BLK
BUS2
DH BLK
V BLK0
SCCY
CONVER u-COM PD5564
M37274
EEP ROM 8K
EEP ROM 128K
CXSTOP
CXOFDET
CXMUTE
CXRESET
CXBUSY
CXACKM
CSDA2
CSCL2
CXBUSY
CXACKM
CSDA2
CSCL2
C.MUTE
MC14066BF
AUTO CONVER
AC SW
C.MUTE
AC SW
CSCL
CSDA
74HC4053
CPU.R
LPF
HV PARA GEN.
HV PARA
TLC2932
PLL
DH BLK
DIGITAL CONVERGENCE
CM0006C
V BLK02
DAC
LPF
STK392-110
CONVER GENCE OUT
H.PULSE CANCELER
MUTE
C.MUTE

3.1.2 CONTROL BLOCK

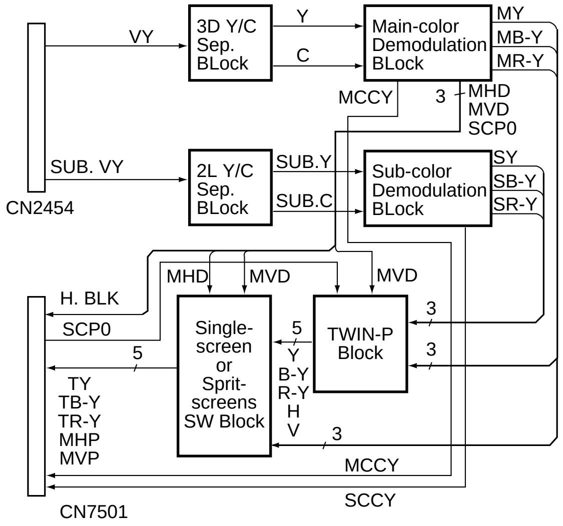

SYNC BLOCK
CLK
DATA
G.ENB
G.RST
V.BLK2
PROGRESSIVE BLOCK
REGULAR : P.SCL P.SDA P.RST P.BUSY
ELETE : P.CLK P.DATA P.RST P.BUSY P.ERR PLL_CLK PLL_DATA PLL_ENB
VS
HS
VIDEO EQ/CP SHARPNESS FLESH TONE BLOCK
DELAY1
DELAY2
FLESH TONE
VMCTL
SHARPNESS
DETAIL
EQ.SW
OSD BLK
OSD HALF
AUX.SW
RGB.SEL
IC4304 DAC IC CXA1315
SCL2
SDA2
H.SIZE.ADJ
H.PHA.ADJ
IC5254 DAC IC CXA1315
V.SIZE.ADJ
R.MUTE
G.MUTE
B.MUTE
PANEL_WIDTH
PANEL_POS
ACL
LIN.WHITE
ASPECT.SW
VIDEO BLOCK
V.MUTE
CCD.R
CCD.G
CCD.B
CCD.BLK
AUX.SW
RGB.SEL
H.SIZE.ADJ
H.PHA.ADJ
H.DEF BLOCK
H.OSC.SW
DH.BLK
V.BLK0
IC2205 CCD SW 74HC157
CC1-R
CC1-G
CC1-B
CC1-BLK
CV-R
CV-G
CV-B
CV-BLK
FRONT BLOCK
KEY
OPD
TMR LED
DTV LED
LED ON/OFF
TWIN PICTURE BLOCK
PASS
SCL3
SDA3
RS
SR
REM OUT
REM IN
IC7103 IC7303 CCY SW NJM2233
MCCY
SCCY
MCOMP.SW
SCOMP.SW
IC2201 SUB u-COM PD5563
DH.BLK
V.BLK0
S_CLK
S_DATA
S_ENB
S_BUSY
RESET
IC2204 OSD IC PD0264A
OSD.DATA
OSD.CLK
OSD.ENB
OSD.BLK
OSD.HALF
OSD.R
OSD.G
OSD.B
AUDIO BLOCK
A.MUTE1
A.MUTE2
IC2203 RESET IC PST9146
COLOR DECORDER BLOCK
MMUTE
SMUTE
IC2452 MAIN u-COM PD5562
V.BLK0
V.DEF BLOCK
V.BLK2
V.SIZE.ADJ
IC1654 OSD SW 74HC157
CV-R
CV-G
CV-B
CV-BLK
3D & 2LINE Y/C SEP BLOCK
S.SW
IC2453 RESET IC PST9146
IC2454 E2P ROM 24LC32A
E2PRST
E-SCL
E-SDA
IC2451 I2C SW 4066
E_SCL
E_SDA
I2C.SW
DH.BLK
V.BLK0
C.MODE1
C.MODE2
CC3.R
CC3.G
CC3.B
CC3.BLK
IC1652 CONVER u-COM PD5464
CSCL
CSDA
CBUSY
CXSTOP
CXOFDET
CXMUTE
CXRESET
CXBUSY
CXACKM
C.MUTE
CONVER GENCE BLOCK
CV.R
CV.G
CV.B
CV.BLK
SCLM
SDAM
IC1656 E2P ROM 24LC08A
CSCL1
CSDA1
IC1655 I2C SW 4066
CSCL2
CSDA2
CXBUSY
CXACKM
ACSW
IC1421 I2C SW 4053
IC1418 E2P ROM 24LC128A
WRITER
RESET
F_SCL
F_SDA
F_BUSY
VPP
PGM_OE
AUTO WHITE BALANCE
E.SCL
E.SDA
AUTO CONVER
C.MUTE
DTV STB
D_SCL
D_SDA
D_BUSY
D_RST
D_INT
IC6305 DAC IC CXA1315
SCL4
SDA4
DTV_SW
SUB_SW
MAIN_SW
COMP1_MUTE
COMP2_MUTE
COMP3_MUTE
COMP_DX1
COMP_DX2
RGB.SEL
AV I/O BLOCK
V_DX1
V_DX2
TV_MUTE
MON.MUTE
V_F_MUTE
V_F_SW
CENT.SW
TUNER2 BLOCK
SCL5
SDA5
HSYNC2
AFT2
TUNER1 BLOCK
SCL1
SDA1
HSYNC1
AFT1
ANT.SW1
MTS.SW
POWER SUPPLY BLOCK
AC.CLK
RELAY
RGB IN
RGB.SW
RGB.SEL

3.1.3 SIGNAL BLOCK

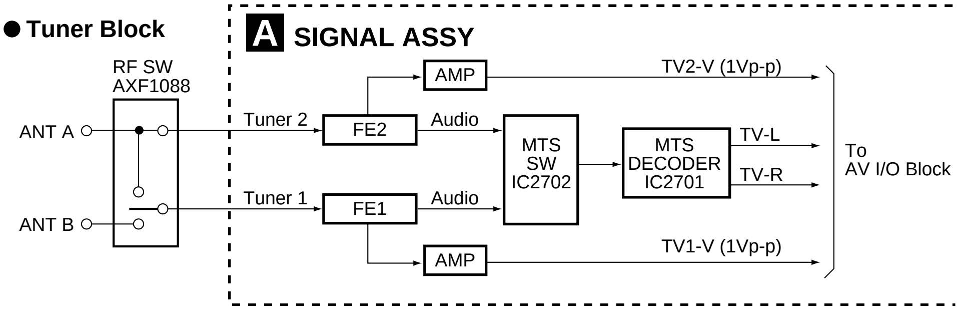
A SIGNAL ASSY


Sub-color Demodulation Block
Twin Picture Block
2 Line Y/C Block
3D Y/C Sep. Block
Main-color Demodulation Block
FE2
AV I/O Component Block
Tuner Block
Main Microcomputer Block
IC2454 EEPROM
FE1

● Video Block


VY
3D Y/C Sep. BLock
Y
C
Main-color Demodulation BLock
MY
MB-Y
MR-Y
MCCY
3
MHD
MVD
SCP0
SUB. VY
CN2454
2L Y/C Sep. BLock
SUB.Y
SUB.C
Sub-color Demodulation BLock
SY
SB-Y
SR-Y
MHD
MVD
MVD
H. BLK
SCP0
5
TY
TB-Y
TR-Y
MHP
MVP
Single-screen or Sprit-screens SW Block
5
Y
B-Y
R-Y
H
V
TWIN-P Block
3
3
3
MCCY
SCCY
CN7501

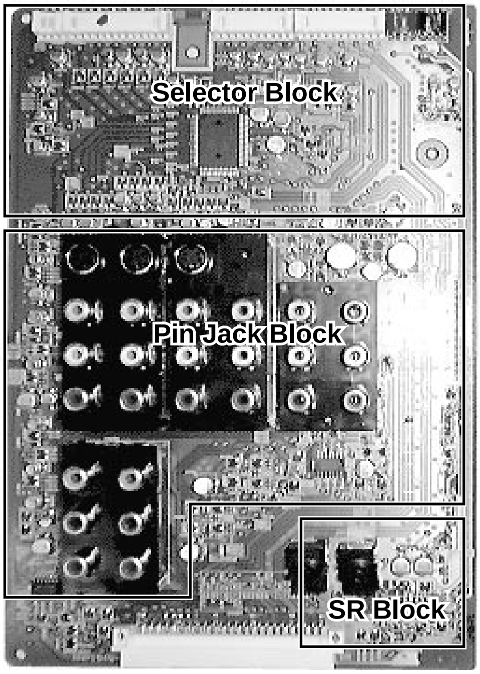
● Tuner Block


A SIGNAL ASSY
RF SW
AXF1088
ANT A
ANT B
Tuner 2
Tuner 1
FE2
FE1
AMP
AMP
Audio
Audio
MTS SW IC2702
MTS DECODER IC2701
TV2-V (1Vp-p)
TV-L
TV-R
TV1-V (1Vp-p)
To AV I/O Block

Note :
Main picture is able to receive the ANT A and B.
Sub picuture is able to receive the ANT A only.

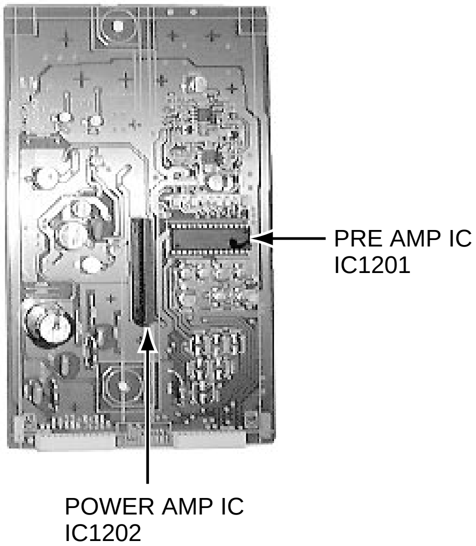
3.1.4 AV I/O and AUDIO ASSYS

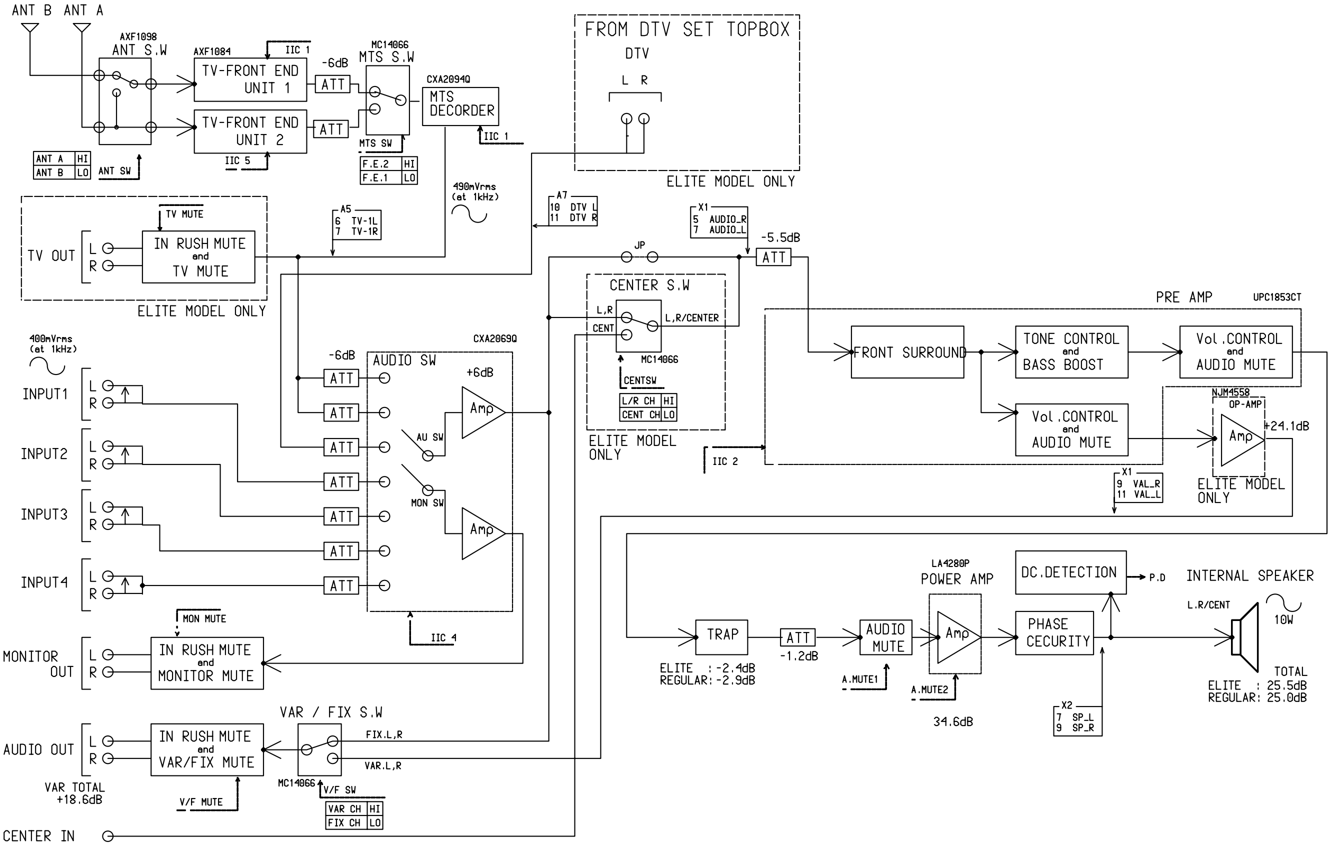
B AV I/O ASSY


Selector Block
Pin Jack Block
SR Block

NOTE) The AUDIO Assy show the state without the heat sink.
Please attach the heat sink when you install the AUDIO Assy.

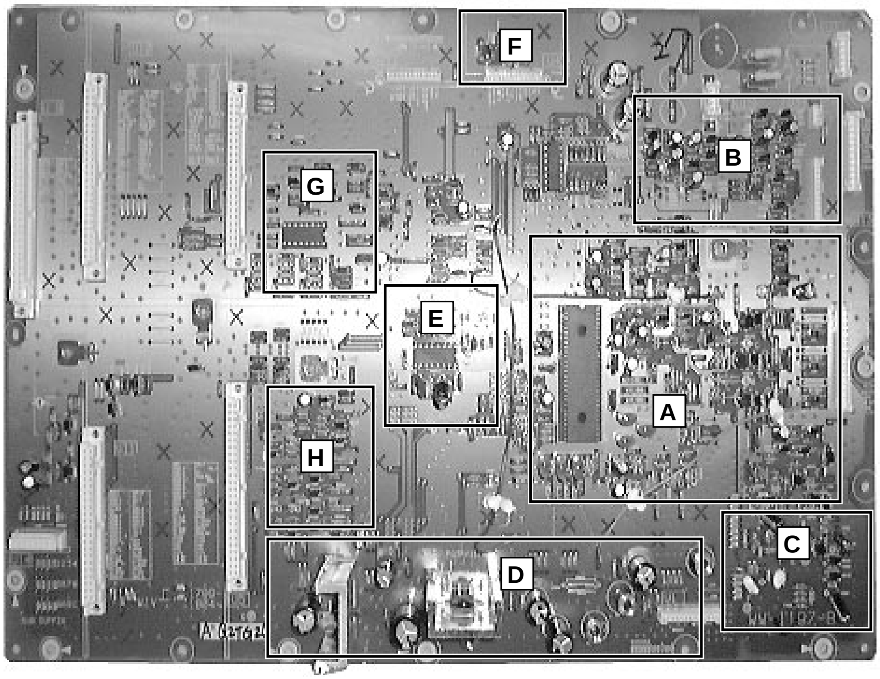
G AUDIO ASSY


PRE AMP IC
IC1201
POWER AMP IC
IC1202

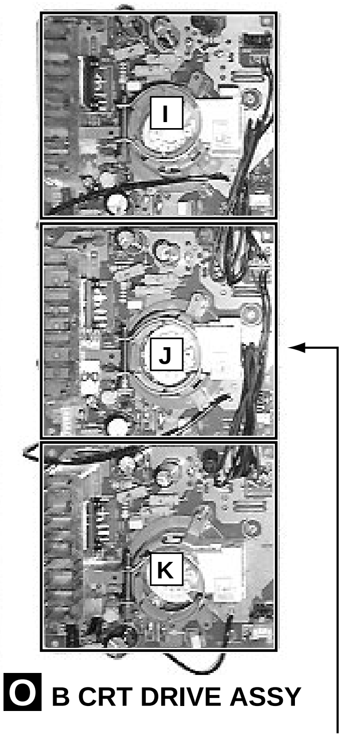

ANT B
ANT A
AXF1098
ANT S.W
ANT A HI
ANT B LO
ANT SW
AXF1084
TV-FRONT END UNIT 1
TV-FRONT END UNIT 2
IIC 1
IIC 5
-6dB
ATT
ATT
MC14066
MTS S.W
MTS SW
F.E.2 HI
F.E.1 LO
CXA2094Q
MTS DECORDER
IIC 1
FROM DTV SET TOPBOX
DTV
L R
ELITE MODEL ONLY
490mVrms (at 1kHz)
A5
6 TV-1L
7 TV-1R
A7
10 DTV L
11 DTV R
X1
5 AUDIO_R
7 AUDIO_L
-5.5dB
ATT
JP
TV OUT
L
R
TV MUTE
IN RUSH MUTE and TV MUTE
ELITE MODEL ONLY
400mVrms (at 1kHz)
INPUT1
INPUT2
INPUT3
INPUT4
-6dB
ATT
CXA2069Q
AUDIO SW
+6dB
Amp
AU SW
MON SW
Amp
IIC 4
CENTER S.W
L,R
CENT
L,R/CENTER
MC14066
CENTSW
L/R CH HI
CENT CH LO
ELITE MODEL ONLY
IIC 2
PRE AMP
UPC1853CT
FRONT SURROUND
TONE CONTROL and BASS BOOST
Vol.CONTROL and AUDIO MUTE
Vol.CONTROL and AUDIO MUTE
NJM4558
OP-AMP
Amp
+24.1dB
X1
9 VAL_R
11 VAL_L
ELITE MODEL ONLY
MON MUTE
MONITOR OUT
IN RUSH MUTE and MONITOR MUTE
VAR / FIX S.W
FIX.L,R
VAR.L,R
AUDIO OUT
IN RUSH MUTE and VAR/FIX MUTE
VAR TOTAL +18.6dB
V/F MUTE
MC14066
V/F SW
VAR CH HI
FIX CH LO
CENTER IN
TRAP
ELITE : -2.4dB
REGULAR: -2.9dB
ATT
-1.2dB
AUDIO MUTE
A.MUTE1
LA4280P
POWER AMP
Amp
A.MUTE2
34.6dB
DC.DETECTION
P.D
PHASE CECURITY
X2
7 SP_L
9 SP_R
INTERNAL SPEAKER
L.R/CENT
10W
TOTAL
ELITE : 25.5dB
REGULAR: 25.0dB

3.1.5 VIDEO, R, G and B CRT DRIVE ASSYS

E VIDEO ASSY

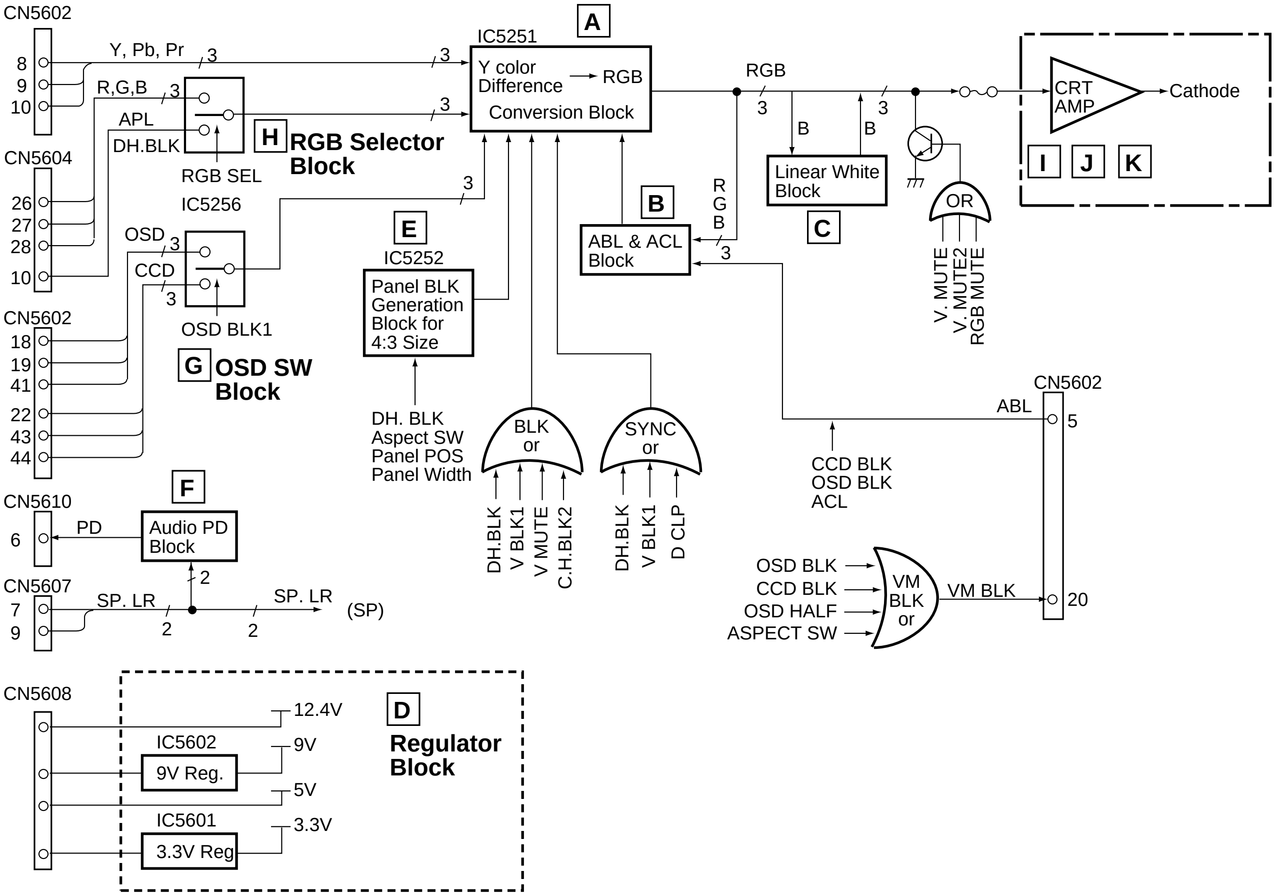


M R CRT DRIVE ASSY



O B CRT DRIVE ASSY

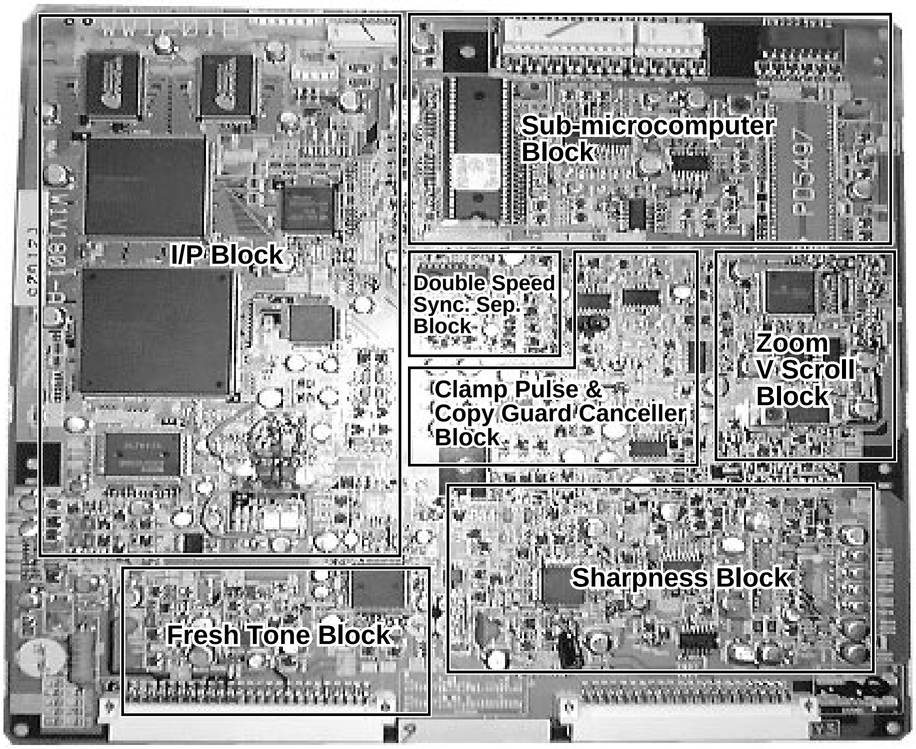
N G CRT DRIVE ASSY


CN5602
8
9
10
Y, Pb, Pr
3
R,G,B
3
APL
DH.BLK
RGB SEL
H RGB Selector Block
CN5604
26
27
28
10
IC5256
OSD
3
CCD
3
OSD BLK1
G OSD SW Block
CN5602
18
19
41
22
43
44
A
IC5251
Y color Difference → RGB
Conversion Block
3
3
3
E
IC5252
Panel BLK Generation Block for 4:3 Size
DH. BLK
Aspect SW
Panel POS
Panel Width
BLK or
DH.BLK
V BLK1
V MUTE
C.H.BLK2
SYNC or
DH.BLK
V BLK1
D CLP
B
ABL & ACL Block
R G B
3
RGB
3
B
B
3
Linear White Block
C
OR
V. MUTE
V. MUTE2
RGB MUTE
CRT AMP
Cathode
I J K
CN5602
ABL
5
CCD BLK
OSD BLK
ACL
OSD BLK
CCD BLK
OSD HALF
ASPECT SW
VM BLK or
VM BLK
20
F
CN5610
6
PD
Audio PD Block
2
CN5607
7
9
SP. LR
2
SP. LR
2
(SP)
CN5608
12.4V
IC5602
9V Reg.
9V
5V
IC5601
3.3V Reg
3.3V
D
Regulator Block

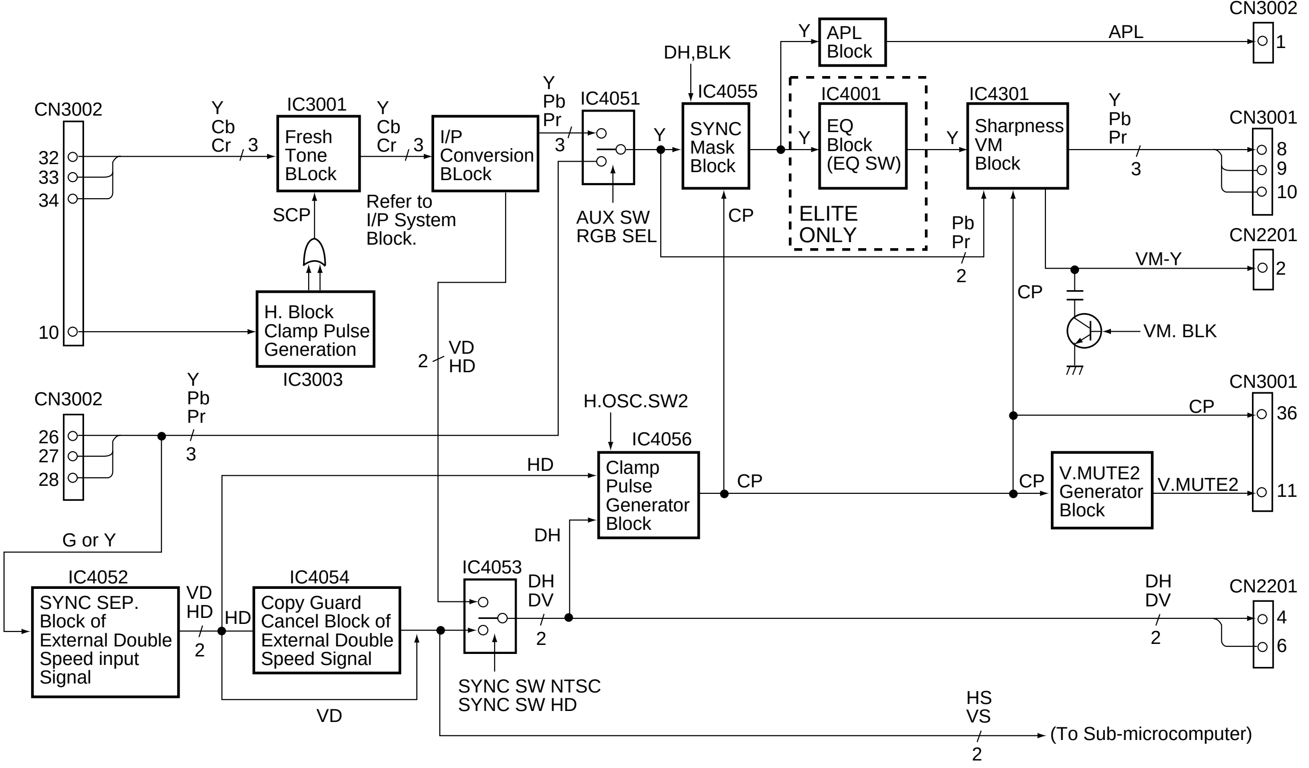
3.1.6 SUB VIDEO ASSY

H SUB VIDEO ASSY (ELITE)

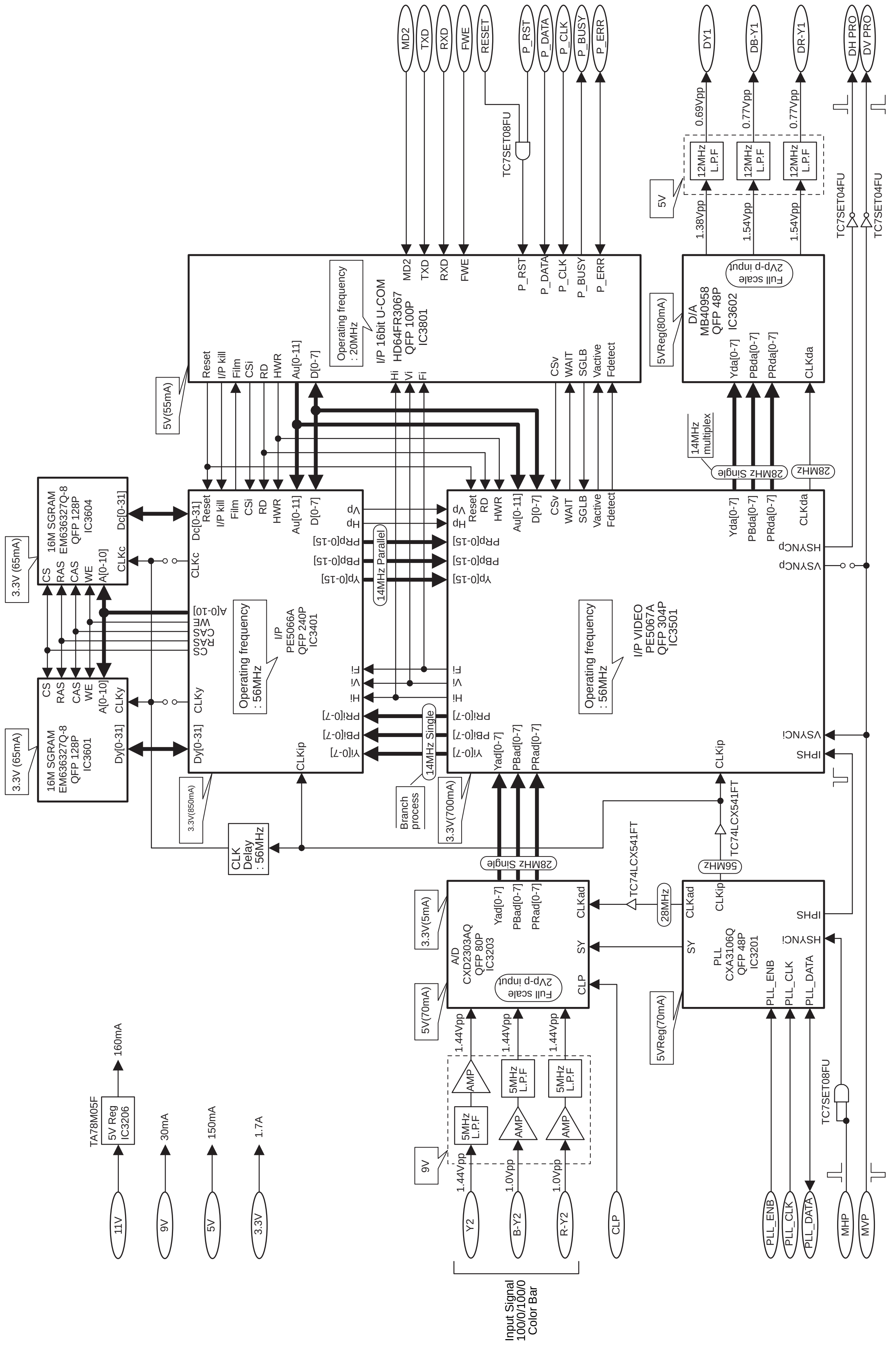
Note : SUB VIDEO ASSY of the REGULAR model is the same as that of the ELITE model excepting I/P Block.


Sub-microcomputer Block
I/P Block
Double Speed Sync. Sep. Block
Zoom V Scroll Block
Clamp Pulse & Copy Guard Canceller Block
Sharpness Block
Fresh Tone Block

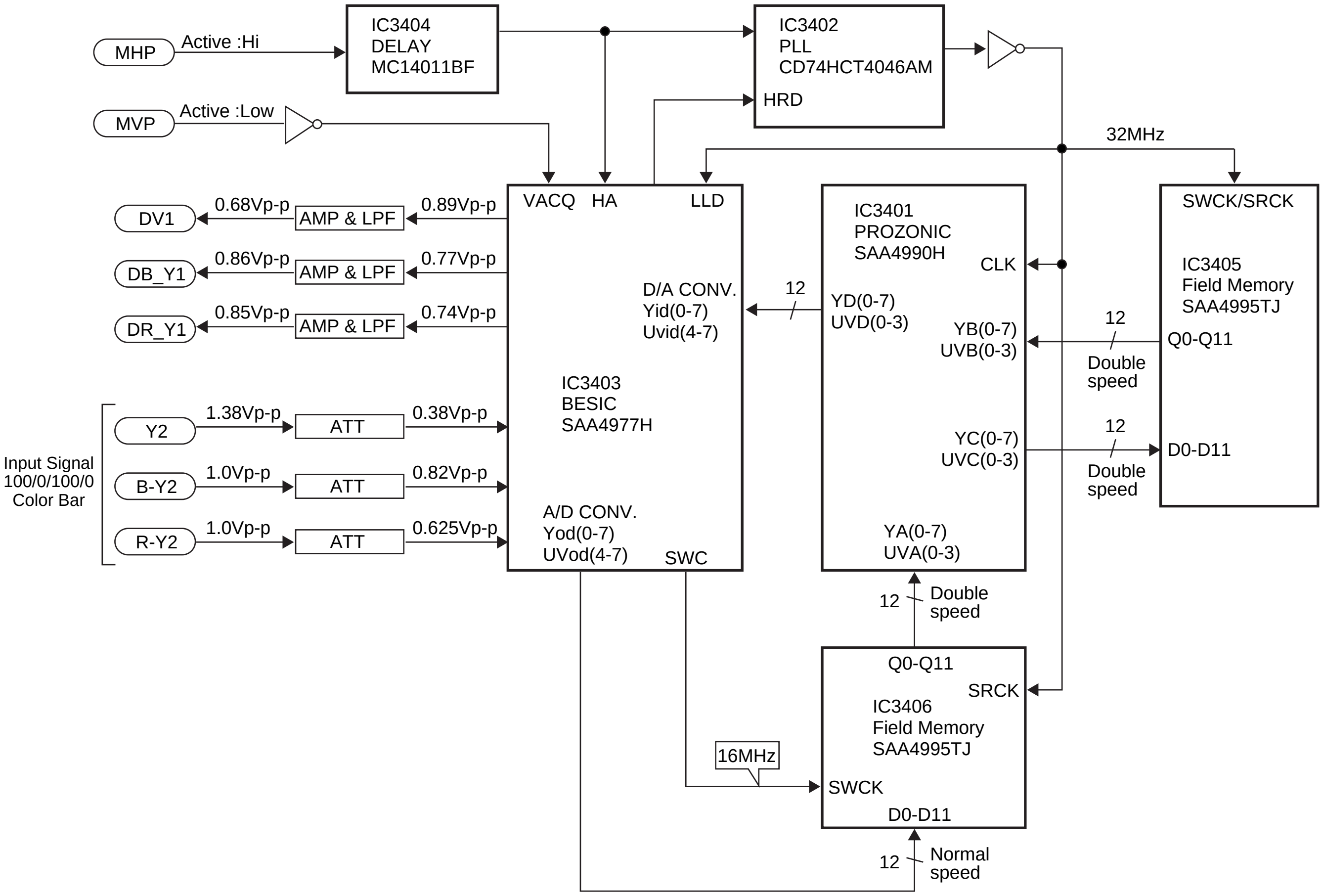
● **Sub Video Block**


CN3002
32
33
34
10
Y
Cb
Cr
3
IC3001
Fresh Tone BLock
SCP
H. Block Clamp Pulse Generation
IC3003
Y
Cb
Cr
3
I/P Conversion BLock
Refer to I/P System Block.
Y
Pb
Pr
3
IC4051
AUX SW
RGB SEL
Y
DH,BLK
IC4055
SYNC Mask Block
CP
Y
APL Block
APL
CN3002
1
IC4001
Y
EQ Block (EQ SW)
ELITE ONLY
Y
IC4301
Sharpness VM Block
Pb
Pr
2
Y
Pb
Pr
3
CN3001
8
9
10
CN2201
VM-Y
2
CP
VM. BLK
CN3001
CP
36
V.MUTE2 Generator Block
CP
V.MUTE2
11
2
VD
HD
CN3002
26
27
28
Y
Pb
Pr
3
G or Y
H.OSC.SW2
IC4056
HD
Clamp Pulse Generator Block
CP
DH
IC4052
SYNC SEP. Block of External Double Speed input Signal
VD
HD
2
HD
IC4054
Copy Guard Cancel Block of External Double Speed Signal
VD
IC4053
DH
DV
2
SYNC SW NTSC
SYNC SW HD
DH
DV
2
CN2201
4
6
HS
VS
2
(To Sub-microcomputer)

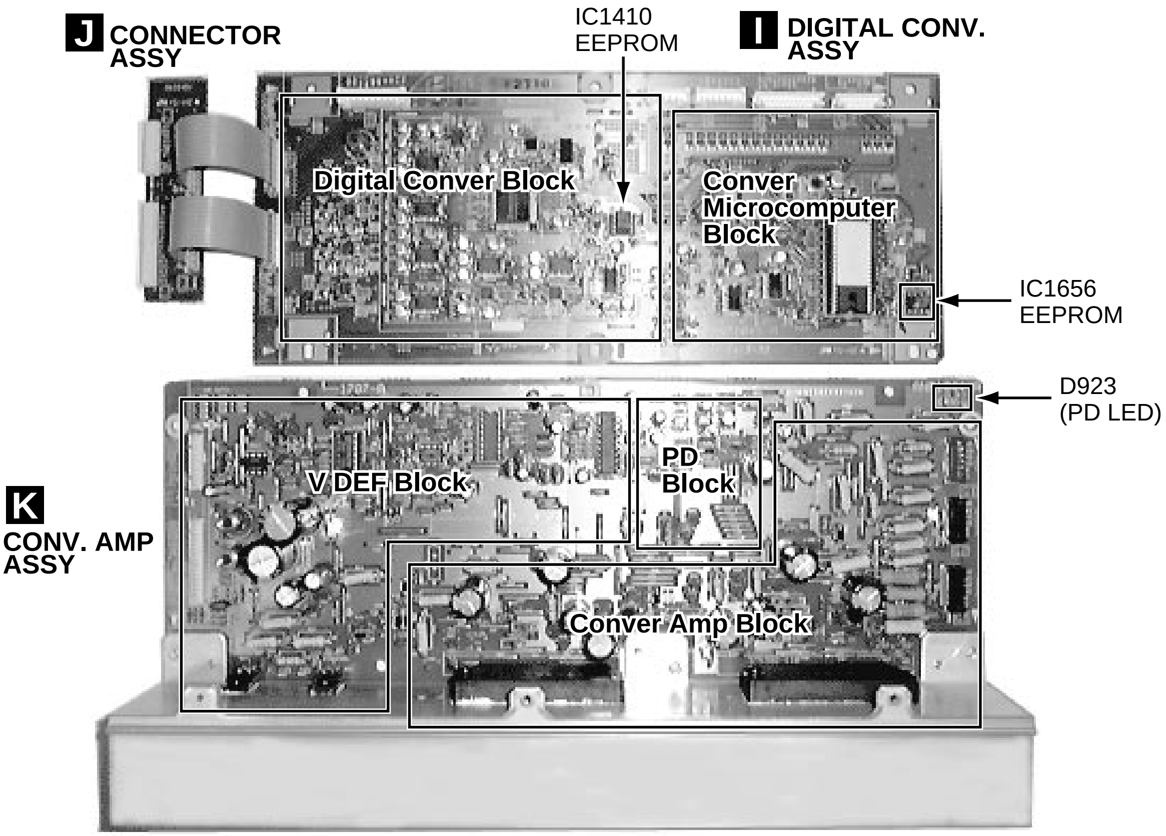
● I/P System Block (ELITE)

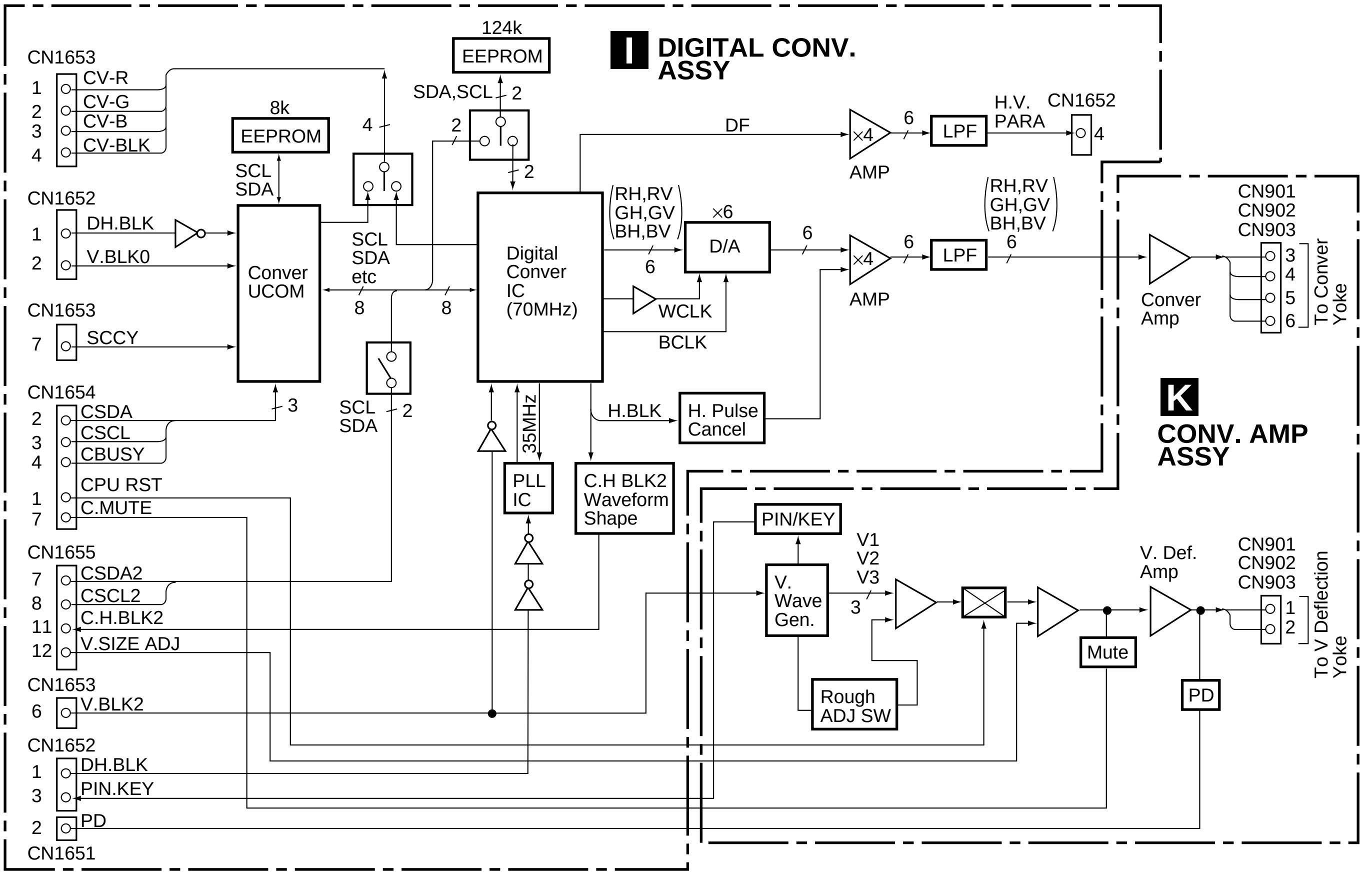

MD2
TXD
RXD
FWE
RESET
P_RST
P_DATA
P_CLK
P_BUSY
P_ERR
TC7SET08FU
DY1
DB-Y1
DR-Y1
DH PRO
DV PRO
0.69Vpp
0.77Vpp
0.77Vpp
12MHz L.P.F
12MHz L.P.F
12MHz L.P.F
5V
1.38Vpp
1.54Vpp
1.54Vpp
TC7SET04FU
TC7SET04FU
I/P 16bit U-COM
HD64FR3067
QFP 100P
IC3801
Operating frequency
: 20MHz
Reset
I/P kill
Film
CSi
RD
HWR
Au[0-11]
D[0-7]
Hi
Vi
Fi
CSv
WAIT
SGLB
Vactive
Fdetect
5V(55mA)
D/A
MB40958
QFP 48P
IC3602
Full scale
2Vp-p input
5VReg(80mA)
Yda[0-7]
PBda[0-7]
PRda[0-7]
CLKda
14MHz multiplex
28MHz Single
28MHz
16M SGRAM
EM636327Q-8
QFP 128P
IC3604
Dc[0-31]
CLKc
CS
RAS
CAS
WE
A[0-10]
3.3V (65mA)
I/P
PE5066A
QFP 240P
IC3401
Operating frequency
: 56MHz
Vp
Hp
PRp[0-15]
PBp[0-15]
Yp[0-15]
14MHz Parallel
Dy[0-31]
CLKy
PRi[0-7]
PBi[0-7]
Yi[0-7]
14MHz Single
CLKip
16M SGRAM
EM636327Q-8
QFP 128P
IC3601
3.3V (65mA)
3.3V(850mA)
CLK Delay
: 56MHz
Branch process
I/P VIDEO
PE5067A
QFP 304P
IC3501
Operating frequency
: 56MHz
HSYNCp
VSYNCp
VSYNCi
IPHS
Yad[0-7]
PBad[0-7]
PRad[0-7]
3.3V(700mA)
TC74LCX541FT
TC74LCX541FT
56MHz
28MHz Single
28MHz
A/D
CXD2303AQ
QFP 80P
IC3203
Full scale
2Vp-p input
CLKad
SY
CLP
3.3V(5mA)
5V(70mA)
PLL
CXA3106Q
QFP 48P
IC3201
CLKip
HSYNCi
PLL_ENB
PLL_CLK
PLL_DATA
5VReg(70mA)
TC7SET08FU
1.44Vpp
1.44Vpp
1.44Vpp
AMP
5MHz L.P.F
5MHz L.P.F
5MHz L.P.F
AMP
AMP
9V
1.44Vpp
1.0Vpp
1.0Vpp
Y2
B-Y2
R-Y2
CLP
PLL_ENB
PLL_CLK
PLL_DATA
MHP
MVP
Input Signal
100/0/100/0
Color Bar
TA78M05F
5V Reg
IC3206
160mA
30mA
150mA
1.7A
11V
9V
5V
3.3V

● I/P System Block (REGULAR)

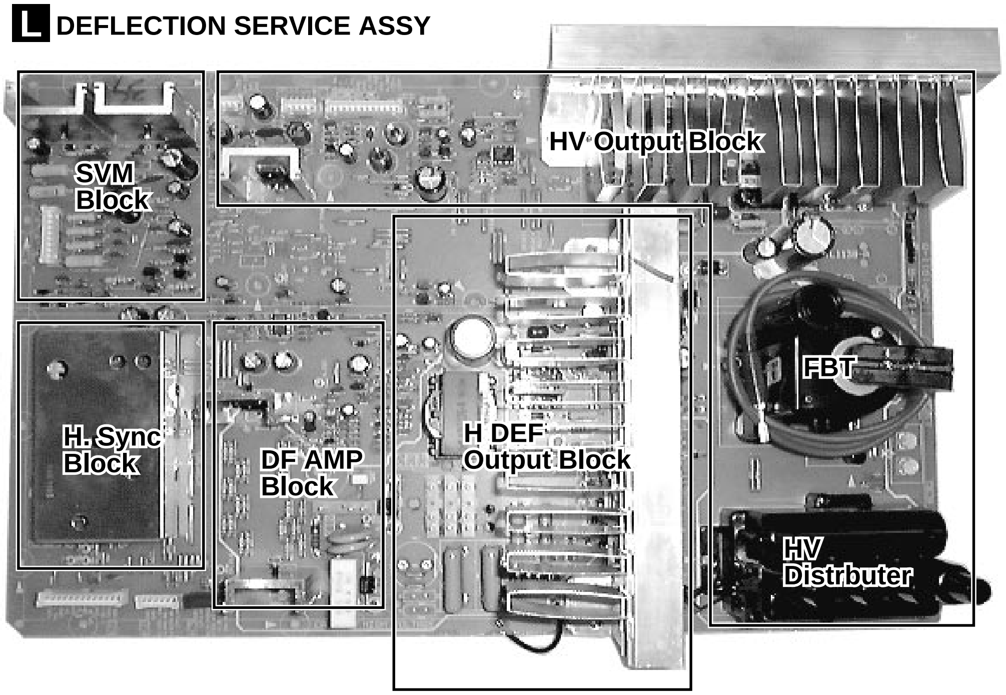

MHP
Active :Hi
IC3404
DELAY
MC14011BF
IC3402
PLL
CD74HCT4046AM
HRD
MVP
Active :Low
32MHz
DV1
0.68Vp-p
AMP & LPF
0.89Vp-p
DB_Y1
0.86Vp-p
AMP & LPF
0.77Vp-p
DR_Y1
0.85Vp-p
AMP & LPF
0.74Vp-p
VACQ
HA
LLD
D/A CONV.
Yid(0-7)
Uvid(4-7)
IC3403
BESIC
SAA4977H
A/D CONV.
Yod(0-7)
UVod(4-7)
SWC
Input Signal
100/0/100/0
Color Bar
Y2
1.38Vp-p
ATT
0.38Vp-p
B-Y2
1.0Vp-p
ATT
0.82Vp-p
R-Y2
1.0Vp-p
ATT
0.625Vp-p
IC3401
PROZONIC
SAA4990H
CLK
12
YD(0-7)
UVD(0-3)
YB(0-7)
UVB(0-3)
YC(0-7)
UVC(0-3)
YA(0-7)
UVA(0-3)
SWCK/SRCK
IC3405
Field Memory
SAA4995TJ
12
Double speed
Q0-Q11
12
Double speed
D0-D11
12
Double speed
Q0-Q11
SRCK
IC3406
Field Memory
SAA4995TJ
16MHz
SWCK
D0-D11
12
Normal speed

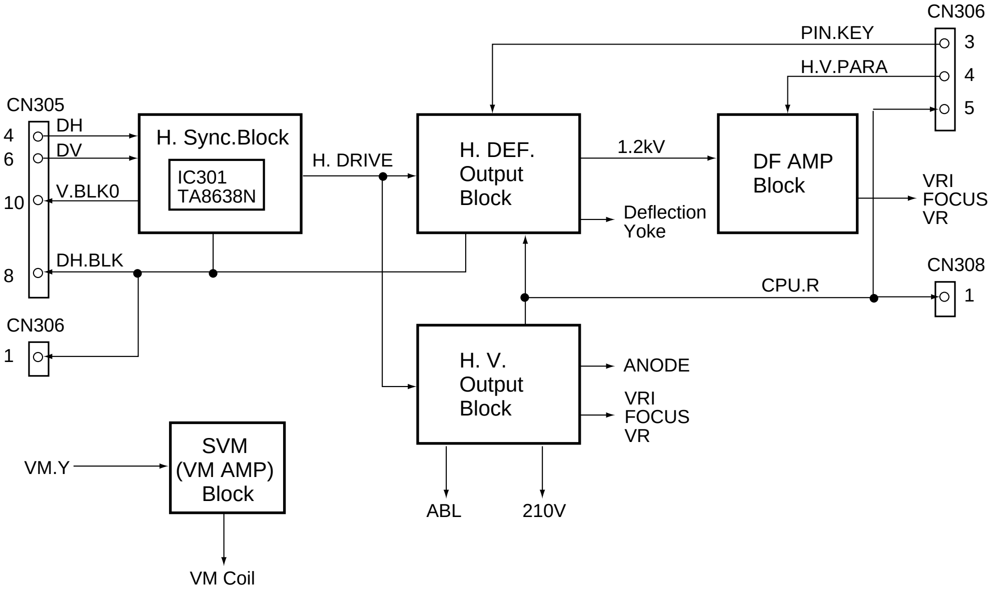
3.1.7 DIGITAL CONV., CONNECTOR and CONV. AMP ASSYS


J CONNECTOR ASSY
IC1410 EEPROM
I DIGITAL CONV. ASSY
Digital Conver Block
Conver Microcomputer Block
IC1656 EEPROM
D923 (PD LED)
K CONV. AMP ASSY
V DEF Block
PD Block
Conver Amp Block


I DIGITAL CONV. ASSY
CN1653
1 CV-R
2 CV-G
3 CV-B
4 CV-BLK
124k
EEPROM
SDA,SCL 2
8k
EEPROM
4
2
2
SCL
SDA
DF
×4
6
LPF
H.V. PARA
CN1652
4
AMP
CN1652
1 DH.BLK
2 V.BLK0
Conver UCOM
SCL SDA etc
8
8
Digital Conver IC (70MHz)
RH,RV GH,GV BH,BV
6
×6
D/A
6
WCLK
BCLK
×4
6
LPF
RH,RV GH,GV BH,BV
6
AMP
CN901 CN902 CN903
3 4 5 6
To Conver Yoke
Conver Amp
CN1653
7 SCCY
CN1654
2 CSDA
3 CSCL
4 CBUSY
1 CPU RST
7 C.MUTE
3
SCL SDA
2
35MHz
H.BLK
H. Pulse Cancel
PLL IC
C.H BLK2 Waveform Shape
K CONV. AMP ASSY
CN1655
7 CSDA2
8 CSCL2
11 C.H.BLK2
12 V.SIZE ADJ
PIN/KEY
V. Wave Gen.
V1 V2 V3
3
Rough ADJ SW
Mute
V. Def. Amp
PD
CN901 CN902 CN903
1 2
To V Deflection Yoke
CN1653
6 V.BLK2
CN1652
1 DH.BLK
3 PIN.KEY
2 PD
CN1651

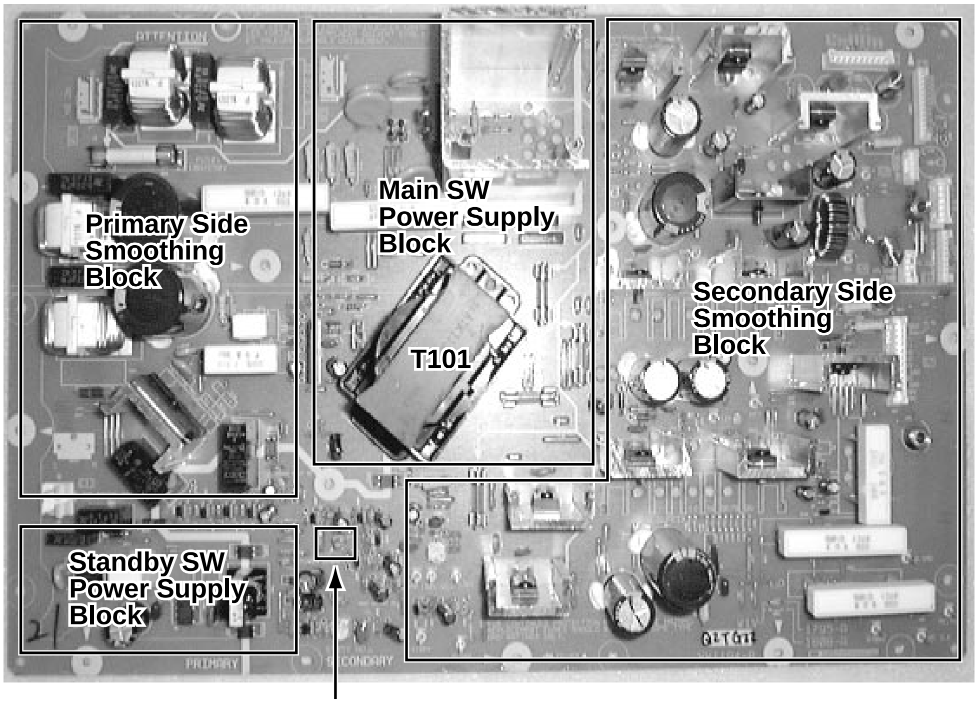
3.1.8 DEFLECTION SERVICE ASSY


L DEFLECTION SERVICE ASSY
SVM Block
HV Output Block
H. Sync Block
DF AMP Block
H DEF Output Block
FBT
HV Distrbuter

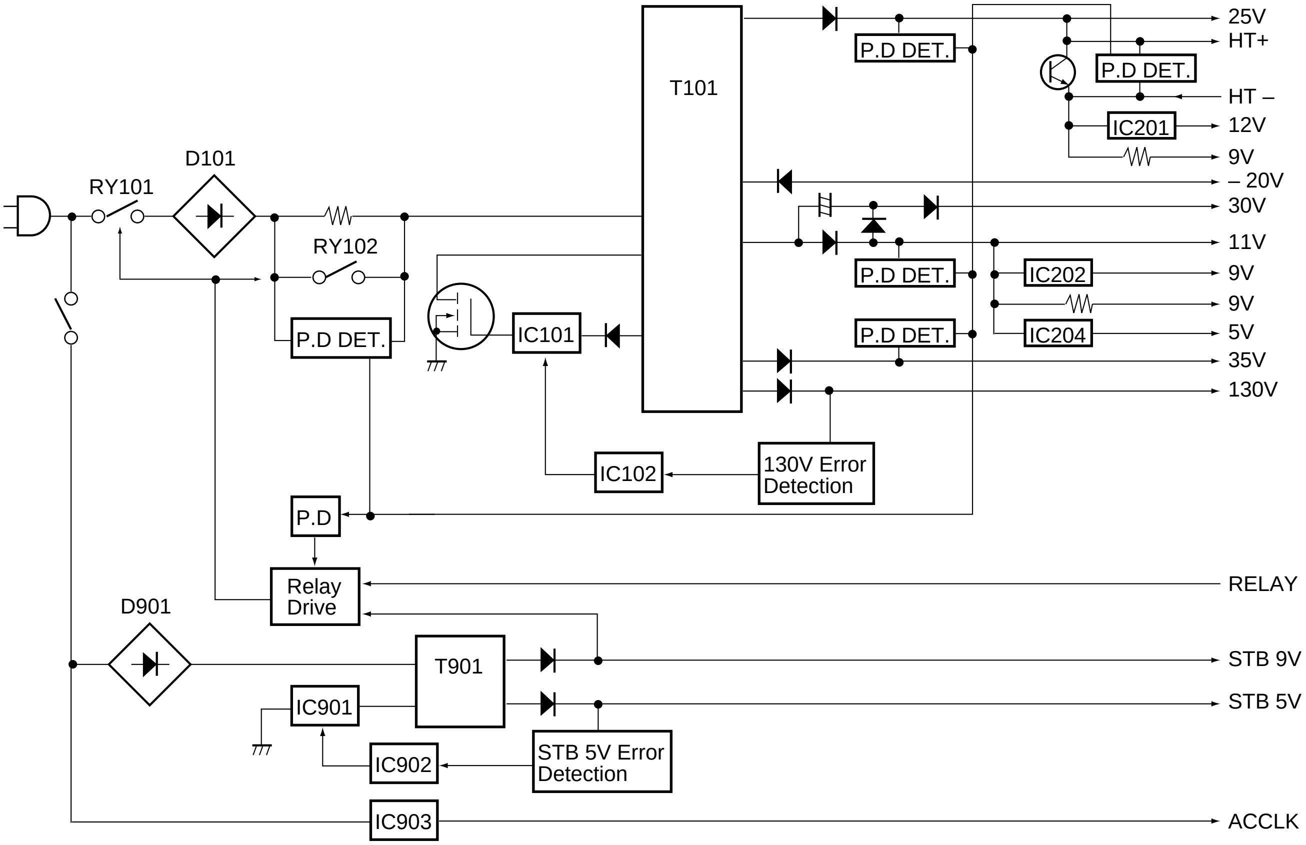

CN306
PIN.KEY
3
H.V.PARA
4
5
CN305
4
DH
6
DV
10
V.BLK0
8
DH.BLK
H. Sync.Block
IC301
TA8638N
H. DRIVE
H. DEF.
Output
Block
1.2kV
DF AMP
Block
VRI
FOCUS
VR
Deflection
Yoke
CN308
CPU.R
1
CN306
1
H. V.
Output
Block
ANODE
VRI
FOCUS
VR
ABL
210V
VM.Y
SVM
(VM AMP)
Block
VM Coil

3.1.9 POWER SUPPLY SERVICE ASSY

P POWER SUPPLY SERVICE ASSY

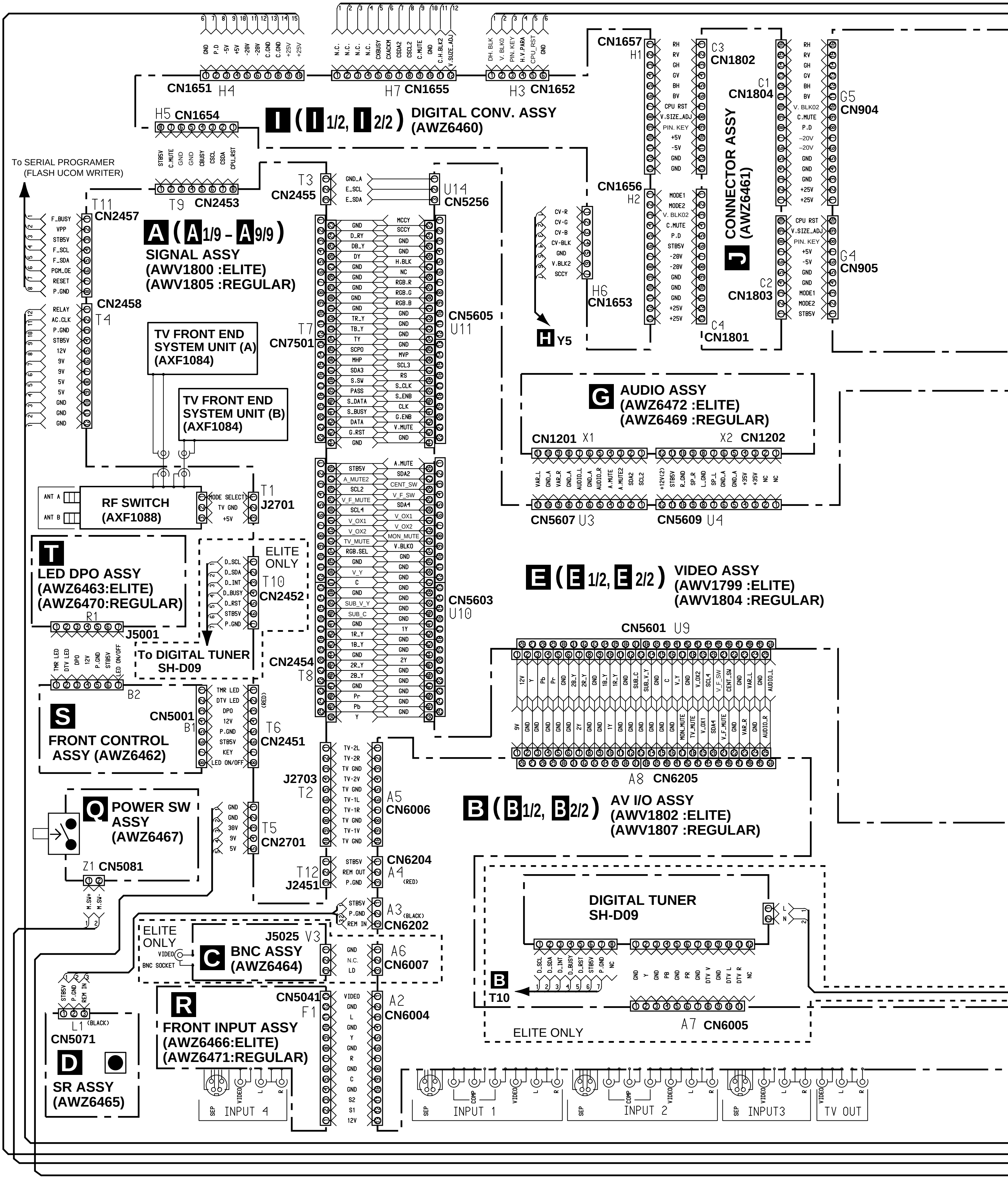

Primary Side Smoothing Block
Main SW Power Supply Block
T101
Secondary Side Smoothing Block
Standby SW Power Supply Block
PRIMARY
SECONDARY

D923
(PD LED)

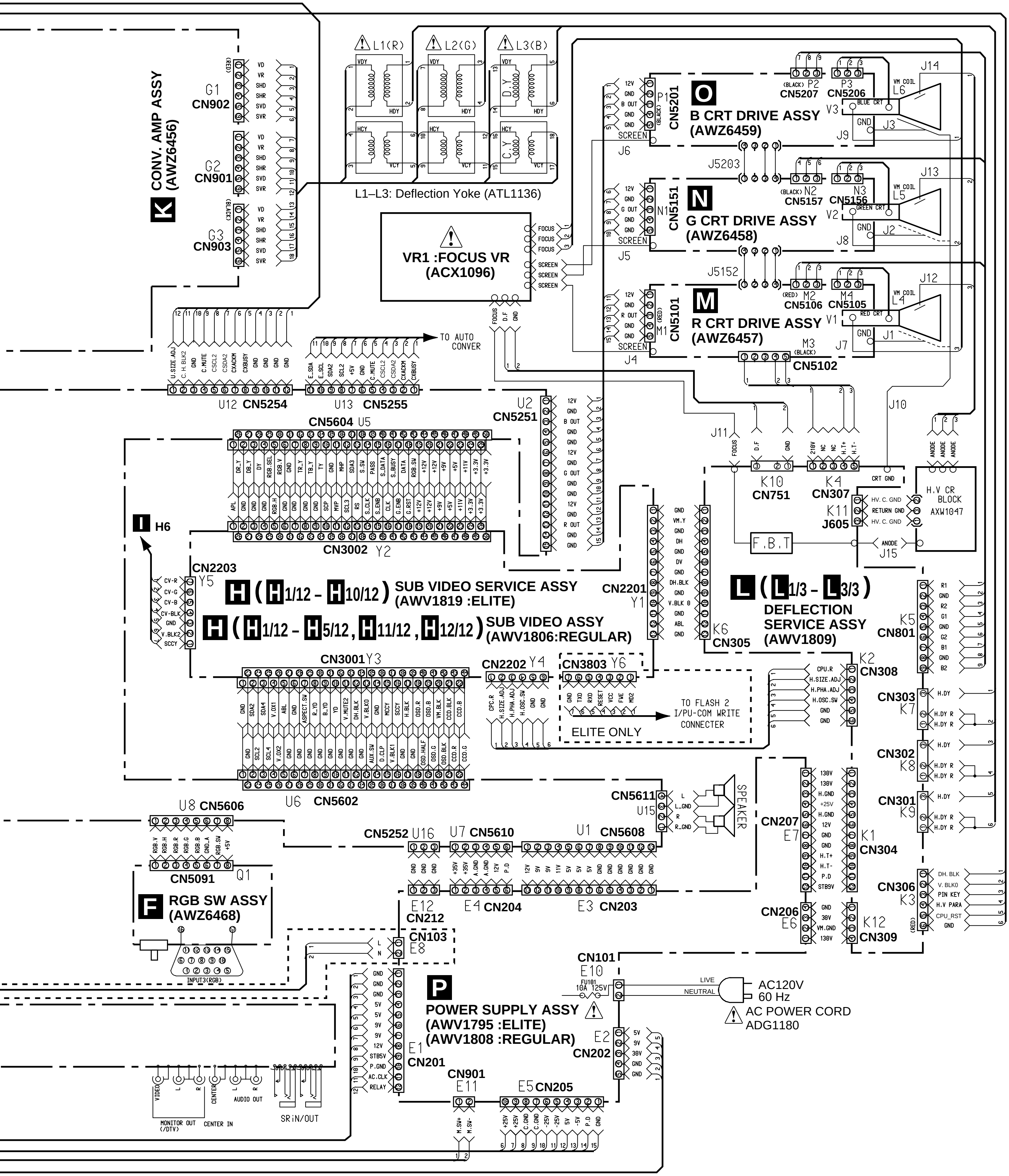

T101
D101
RY101
RY102
P.D DET.
IC101
IC102
130V Error Detection
P.D
Relay Drive
D901
T901
IC901
IC902
IC903
STB 5V Error Detection
P.D DET.
P.D DET.
IC201
P.D DET.
IC202
P.D DET.
IC204
25V
HT+
HT –
12V
9V
– 20V
30V
11V
9V
9V
5V
35V
130V
RELAY
STB 9V
STB 5V
ACCLK

3.2 OVERALL CONNECTION DIAGRAM

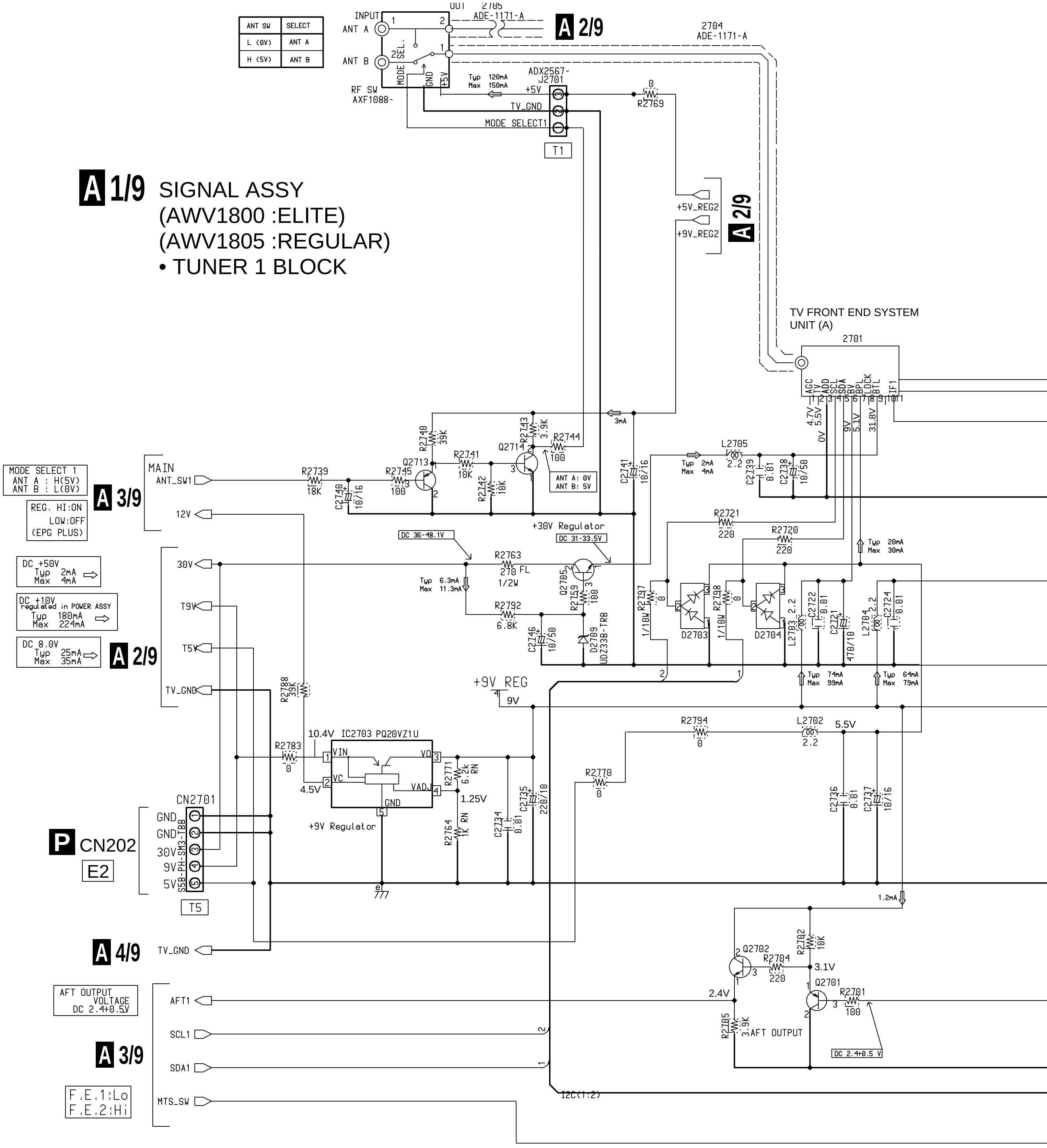
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".


I (I 1/2, I 2/2) DIGITAL CONV. ASSY (AWZ6460)
CN1651 H4
CN1655 H7
CN1652 H3
CN1654 H5
CN2453 T9
To SERIAL PROGRAMER (FLASH UCOM WRITER)
CN2457 T11
CN2458 T4
A (A1/9 – A9/9) SIGNAL ASSY (AWV1800 :ELITE) (AWV1805 :REGULAR)
CN2455 T3
CN5256 U14
CN7501 T7
CN5605 U11
CN5603 U10
CN2454 T8
TV FRONT END SYSTEM UNIT (A) (AXF1084)
TV FRONT END SYSTEM UNIT (B) (AXF1084)
RF SWITCH (AXF1088)
ANT A
ANT B
J2701 T1
T LED DPO ASSY (AWZ6463:ELITE) (AWZ6470:REGULAR)
J5001 R1
ELITE ONLY
CN2452 T10
To DIGITAL TUNER SH-D09
S FRONT CONTROL ASSY (AWZ6462)
CN5001 B1 B2
CN2451 T6
Q POWER SW ASSY (AWZ6467)
CN5081 Z1
CN2701 T5
J2703 T2
CN6006 A5
J2451 T12
CN6204 A4
CN6202 A3
C BNC ASSY (AWZ6464)
J5025 V3
VIDEO BNC SOCKET
CN6007 A6
R FRONT INPUT ASSY (AWZ6466:ELITE) (AWZ6471:REGULAR)
CN5041 F1
CN6004 A2
D SR ASSY (AWZ6465)
CN5071 L1
INPUT 4
INPUT 1
INPUT 2
INPUT3
TV OUT
CN1657 H1
CN1656 H2
CN1653 H6
H Y5
J CONNECTOR ASSY (AWZ6461)
CN1802 C3
CN1804 C1
CN1803 C2
CN1801 C4
CN904 G5
CN905 G4
G AUDIO ASSY (AWZ6472 :ELITE) (AWZ6469 :REGULAR)
CN1201 X1
CN1202 X2
CN5607 U3
CN5609 U4
E (E 1/2, E 2/2) VIDEO ASSY (AWV1799 :ELITE) (AWV1804 :REGULAR)
CN5601 U9
CN6205 A8
B (B1/2, B2/2) AV I/O ASSY (AWV1802 :ELITE) (AWV1807 :REGULAR)
DIGITAL TUNER SH-D09
B T10
CN6005 A7
ELITE ONLY

Note : Model names indicated by "ELITE" and "REGULAR" are as follows:
ELITE : PRO-610HD and PRO-510HD, REGULAR : SD-582HD5 and SD-532HD5


A
B
C
D
K CONV. AMP ASSY (AWZ6456)
G1 CN902
G2 CN901
G3 CN903
L1(R) L2(G) L3(B)
L1–L3: Deflection Yoke (ATL1136)
VR1 :FOCUS VR (ACX1096)
FOCUS
SCREEN
D.F
GND
O B CRT DRIVE ASSY (AWZ6459)
P1 CN5201
P2 CN5207
P3 CN5206
N G CRT DRIVE ASSY (AWZ6458)
N1 CN5151
N2 CN5157
N3 CN5156
J5203
J5152
M R CRT DRIVE ASSY (AWZ6457)
M1 CN5101
M2 CN5106
M4 CN5105
M3 CN5102
J14 J13 J12
L6 L5 L4
V3 V2 V1
J9 J8 J7
J3 J2 J1
J6 J5 J4
VM COIL
BLUE CRT
GREEN CRT
RED CRT
TO AUTO CONVER
U12 CN5254
U13 CN5255
U2 CN5251
CN5604 U5
CN3002 Y2
I H6
CN2203 Y5
H (H1/12 – H10/12) SUB VIDEO SERVICE ASSY (AWV1819 :ELITE)
H (H1/12 – H5/12 , H11/12 , H12/12) SUB VIDEO ASSY (AWV1806:REGULAR)
CN2201 Y1
CN3001 Y3
CN2202 Y4
CN3803 Y6
TO FLASH 2 I/PU-COM WRITE CONNECTER
ELITE ONLY
J11 J10
K10 CN751
K4 CN307
K11 J605
CRT GND
H.V CR BLOCK AXW1047
F.B.T
ANODE J15
L (L1/3 – L3/3) DEFLECTION SERVICE ASSY (AWV1809)
K6 CN305
K5 CN801
K2 CN308
CN303 K7
CN302 K8
CN301 K9
CN207 E7
K1 CN304
CN306 K3
CN206 E6
K12 CN309
CN5611 U15
SPEAKER
U6 CN5602
U8 CN5606
CN5252 U16
U7 CN5610
U1 CN5608
E12 CN212
E4 CN204
E3 CN203
CN5091 Q1
F RGB SW ASSY (AWZ6468)
INPUT3(RGB)
CN103 E8
CN101 E10
FU101 10A 125V
LIVE
NEUTRAL
AC120V 60 Hz
AC POWER CORD ADG1180
P POWER SUPPLY ASSY (AWV1795 :ELITE) (AWV1808 :REGULAR)
E1 CN201
E2 CN202
CN901 E11
E5 CN205
VIDEO
CENTER
AUDIO OUT
MONITOR OUT (/DTV)
CENTER IN
SRiN/OUT

3.3 SIGNAL ASSY (1/9)



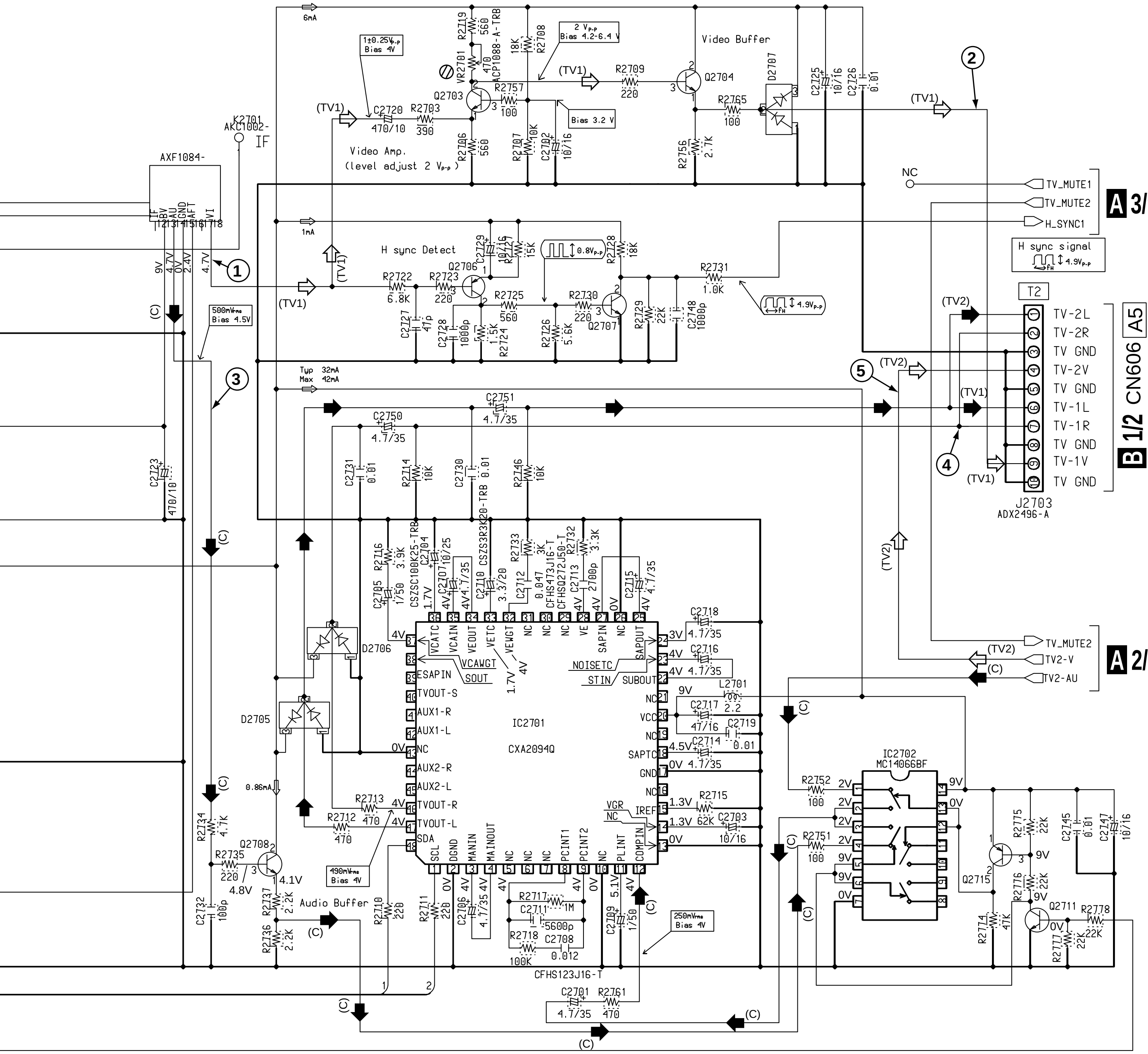
A 1/9 SIGNAL ASSY
(AWV1800 :ELITE)
(AWV1805 :REGULAR)
• TUNER 1 BLOCK

ANT SW
SELECT
L (0V)
ANT A
H (5V)
ANT B
INPUT
ANT A
ANT B
OUT
2705
ADE-1171-A
A 2/9
2704
ADE-1171-A
MODE SEL.
GND
+5V
RF SW
AXF1088-
Typ 120mA
Max 150mA
ADX2567-
J2701
+5V
TV_GND
MODE SELECT1
T1
0
R2769
+5V_REG2
+9V_REG2
A 2/9
TV FRONT END SYSTEM
UNIT (A)
2701
AGC
TV
ADD
SCL
SDA
BV
BPL
LOCK
BTL
IF1
4.7V
5.5V
0V
9V
5.1V
31.8V
3mA
R2740
39K
R2743
3.9K
R2744
100
Q2714
R2741
10K
Q2713
R2739
18K
R2745
100
C2740
10/16
R2742
10K
ANT A: 0V
ANT B: 5V
C2741
10/16
L2705
2.2
Typ 2mA
Max 4mA
C2739
0.01
C2738
10/50
MODE SELECT 1
ANT A : H(5V)
ANT B : L(0V)
MAIN
ANT_SW1
A 3/9
REG. HI:ON
LOW:OFF
(EPG PLUS)
12V
+30V Regulator
DC 36-48.1V
DC 31-33.5V
R2721
220
R2720
220
Typ 20mA
Max 30mA
DC +50V
Typ 2mA
Max 4mA
30V
R2763
270 FL
1/2W
Q2705
R2759
100
Typ 6.3mA
Max 11.3mA
DC +10V
regulated in POWER ASSY
Typ 180mA
Max 224mA
T9V
R2792
6.8K
C2746
10/50
D2709
UDZ33B-TRB
R2797
0
1/10W
D2703
R2798
0
1/10W
D2704
L2703
2.2
C2722
0.01
C2721
470/10
L2704
2.2
C2724
0.01
DC 8.0V
Typ 25mA
Max 35mA
T5V
A 2/9
TV_GND
R2788
39K
+9V_REG
9V
Typ 74mA
Max 99mA
Typ 64mA
Max 79mA
10.4V
IC2703 PQ20VZ1U
R2783
0
VIN
VO
VC
VADJ
GND
4.5V
R2771
6.2k RN
1.25V
+9V Regulator
R2764
1K RN
C2734
0.01
C2735
220/10
R2794
0
L2702
2.2
5.5V
R2770
0
C2736
0.01
C2737
10/16
CN2701
GND
GND
30V
9V
5V
S5B-PH-SM3-TBB
T5
P CN202
E2
1.2mA
A 4/9
TV_GND
Q2702
R2702
10K
R2704
220
3.1V
Q2701
R2701
100
2.4V
R2705
3.9K
AFT OUTPUT
DC 2.4+0.5 V
AFT OUTPUT
VOLTAGE
DC 2.4+0.5V
AFT1
SCL1
SDA1
A 3/9
MTS_SW
F.E.1:Lo
F.E.2:Hi
I2C(1:2)

Notes
1.RESISTORS
Indicated in Ω
tolerance unless otherwise noted k Ω
2.CAPASITORS
Indicated in capacity(uF)/Voltage unless
otherwise noted p pF
Indication without voltage is 50V except electrolytic capacitor.

2SA1162(YGR)-TLB
2SC2712(YGR)-TLB
1SS352-TRB
1SS226-TRB

(C) ➡ : COMPOSITE AUDIO SIGNAL ROUTE
(TV1) ⇨ : VIDEO SIGNAL ROUTE (TV1)
(TV2) ⇨ : VIDEO SIGNAL ROUTE (TV2)
➡ : AUDIO SIGNAL ROUTE
(TV1) ➡ : AUDIO SIGNAL ROUTE (TV1)
(TV2) ➡ : AUDIO SIGNAL ROUTE (TV2)

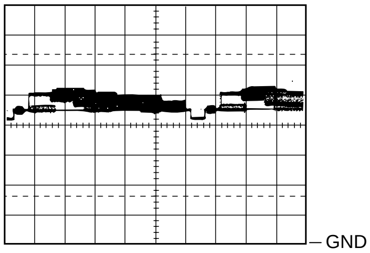

Video Buffer
Q2704
D2707
C2725 10/16
C2726 0.01
R2709 220
R2765 100
R2756 2.7K
2 Vp-p Bias 4.2-6.4 V
R2708 18K
R2719 560
VR2701 470 ACP1088-A-TRB
Q2703
R2757 100
Bias 3.2 V
1±0.25Vp-p Bias 4V
C2720 470/10
R2703 390
R2706 560
R2707 10K
C2702 10/16
Video Amp.
(level adjust 2 Vp-p)
K2701 AKC1002-IF
AXF1084-
IF 8V AU GND AFT VI
9V 4.7V 0V 2.4V 4.7V
6mA
1mA
H sync Detect
Q2706
C2729 10/16
R2727 15K
0.8Vp-p
R2728 18K
R2722 6.8K
R2723 220
R2725 560
R2730 220
R2731 1.0K
Q2707
C2727 47p
C2728 1000p
R2724 1.5K
R2726 5.6K
R2729 22K
C2748 1000p
4.9Vp-p
500mVrms Bias 4.5V
Typ 32mA Max 42mA
C2751 4.7/35
C2750 4.7/35
C2723 470/10
C2731 0.01
R2714 10K
C2730 0.01
R2746 10K
NC
TV_MUTE1
TV_MUTE2
H_SYNC1
A 3/9
H sync signal 4.9Vp-p
T2
TV-2L
TV-2R
TV GND
TV-2V
TV GND
TV-1L
TV-1R
TV GND
TV-1V
TV GND
J2703
ADX2496-A
B 1/2 CN606 A5
R2716 3.9K
CSZSC100K25-TRB
C2704 10/25
C2705 1/50
C2707 4.7/35
CSZS3R3K20-TRB
C2710 3.3/20
R2733 3K
C2712 0.047
CFHS473J16-T
CFHSQ272J50-T
C2713 2700p
R2732 3.3K
C2715 4.7/35
D2706
D2705
IC2701
CXA2094Q
VCATC VCAIN VEOUT VETC VEWGT NC NC NC VE SAPIN NC SAPOUT
VCAWGT
SOUT
ESAPIN
TVOUT-S
AUX1-R
AUX1-L
NC
AUX2-R
AUX2-L
TVOUT-R
TVOUT-L
SDA
NOISETC
STIN SUBOUT
NC VCC NC SAPTC GND NC IREF
VGR NC
SCL DGND MAINOUT NC NC NC PCINT1 PCINT2 NC PLINT COMPIN
C2718 4.7/35
C2716 4.7/35
L2701 2.2
C2717 47/16
C2719 0.01
C2714 4.7/35
R2715 62K
C2703 10/16
R2713 470
R2712 470
490mVrms Bias 4V
0.86mA
R2734 4.7K
Q2708
R2735 220
4.1V
4.8V
C2732 100p
R2737 2.2K
R2736 2.2K
Audio Buffer
R2710 220
R2711 220
C2706 4.7/35
R2717 1M
C2711 5600p
R2718 100K
C2708 0.012
C2709 1/50
CFHS123J16-T
250mVrms Bias 4V
C2701 4.7/35
R2761 470
TV_MUTE2
TV2-V
TV2-AU
A 2/9
IC2702
MC14066BF
R2752 100
R2751 100
9V
R2775 22K
C2745 0.01
C2747 10/16
Q2715
R2776 22K
Q2711
R2778 22K
R2774 47K
R2777 22K
(C)
(TV1)
(TV2)
1
2
3
4
5

3.4 SIGNAL ASSY (2/9)

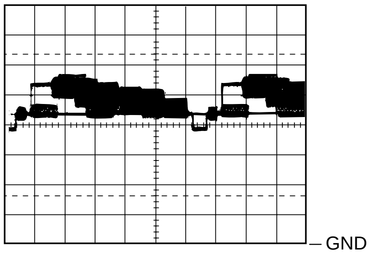
A 1/9 SIGNAL ASSY (1/9)

Input signal
Video signal : EIA full color-bar
Picture quality : Standard
Range :DC range (Unless otherwise noted)

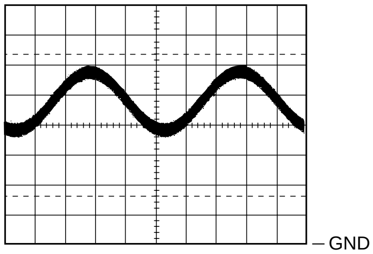
① **2701-pin 18**
V: 1V/div. H: 10µsec/div.



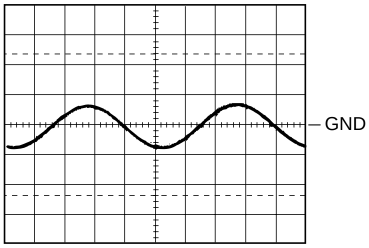
② **J2703-pin 9**
V: 1V/div. H: 10µsec/div.



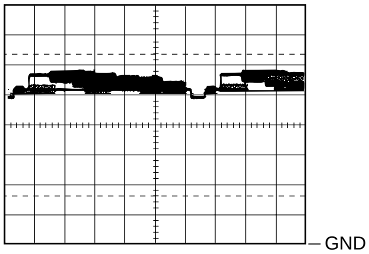
③ **2701-pin 14**
V: 1V/div. H: 200µsec/div.

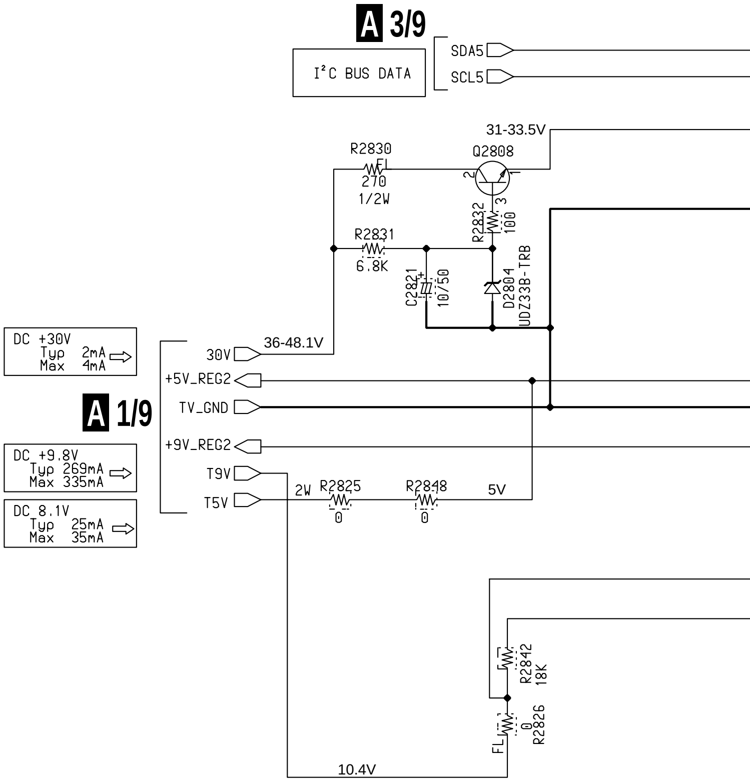


④ **J2703-pin 2, 7**
V: 1V/div. H: 200µsec/div.



⑤ **J2703-pin 4**
V: 1V/div. H: 10µsec/div.

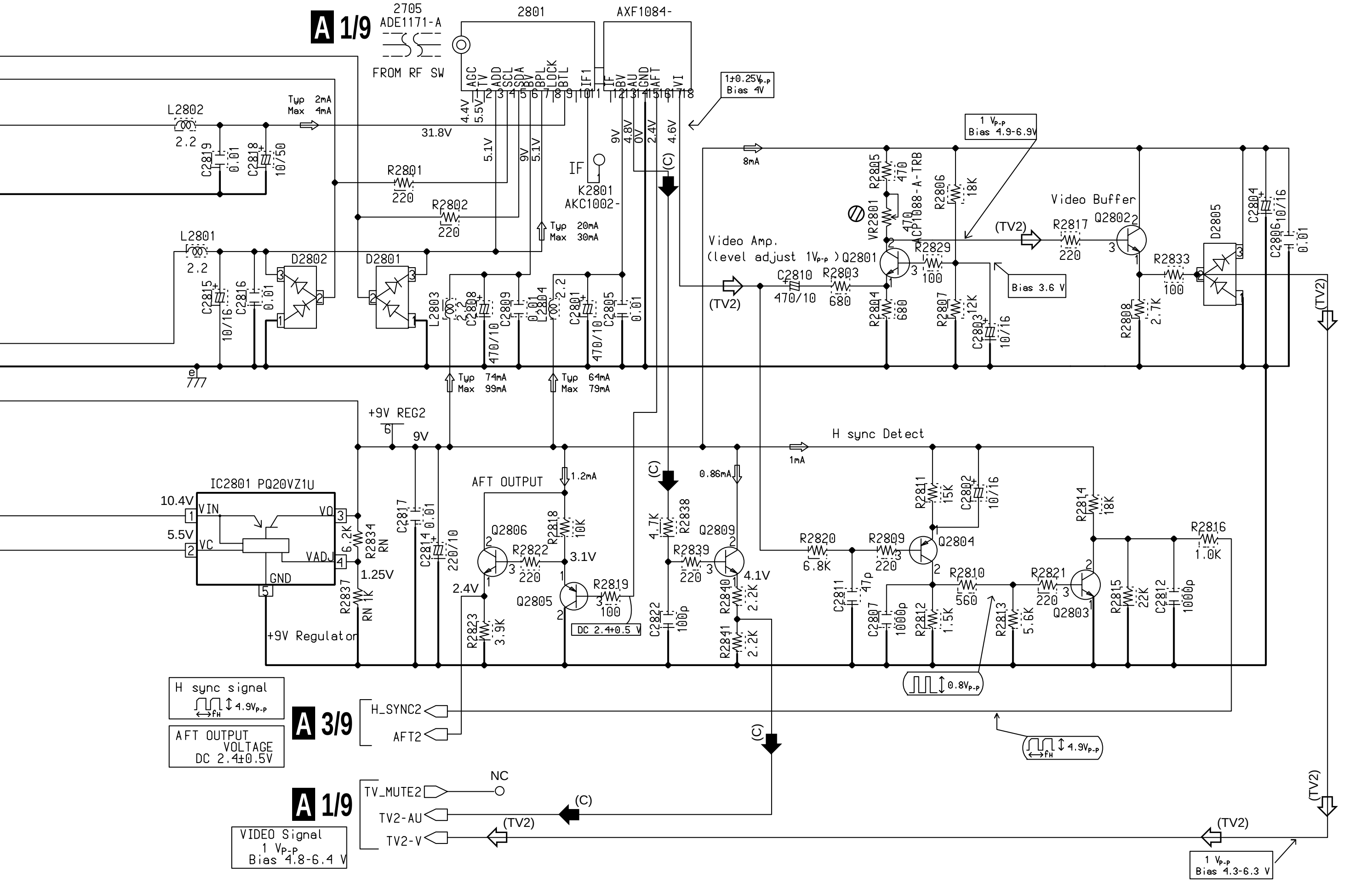



A 3/9
I²C BUS DATA
SDA5
SCL5
31-33.5V
R2830
FL
270
1/2W
Q2808
R2831
6.8K
R2832
100
C2821
10/50
D2804
UDZ33B-TRB
DC +30V
Typ 2mA
Max 4mA
A 1/9
36-48.1V
30V
+5V_REG2
TV_GND
+9V_REG2
T9V
T5V
DC +9.8V
Typ 269mA
Max 335mA
DC 8.1V
Typ 25mA
Max 35mA
2W
R2825
0
R2848
0
5V
R2842
18K
FL
R2826
0
10.4V

A 2/9 SIGNAL ASSY (AWV1800 :ELITE) (AWV1805 :REGULAR) • TUNER 2 BLOCK

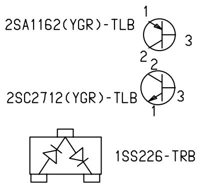
(TV2) ⇨ : VIDEO SIGNAL ROUTE (TV2)

(C) ➡ : COMPOSITE AUDIO SIGNAL ROUTE

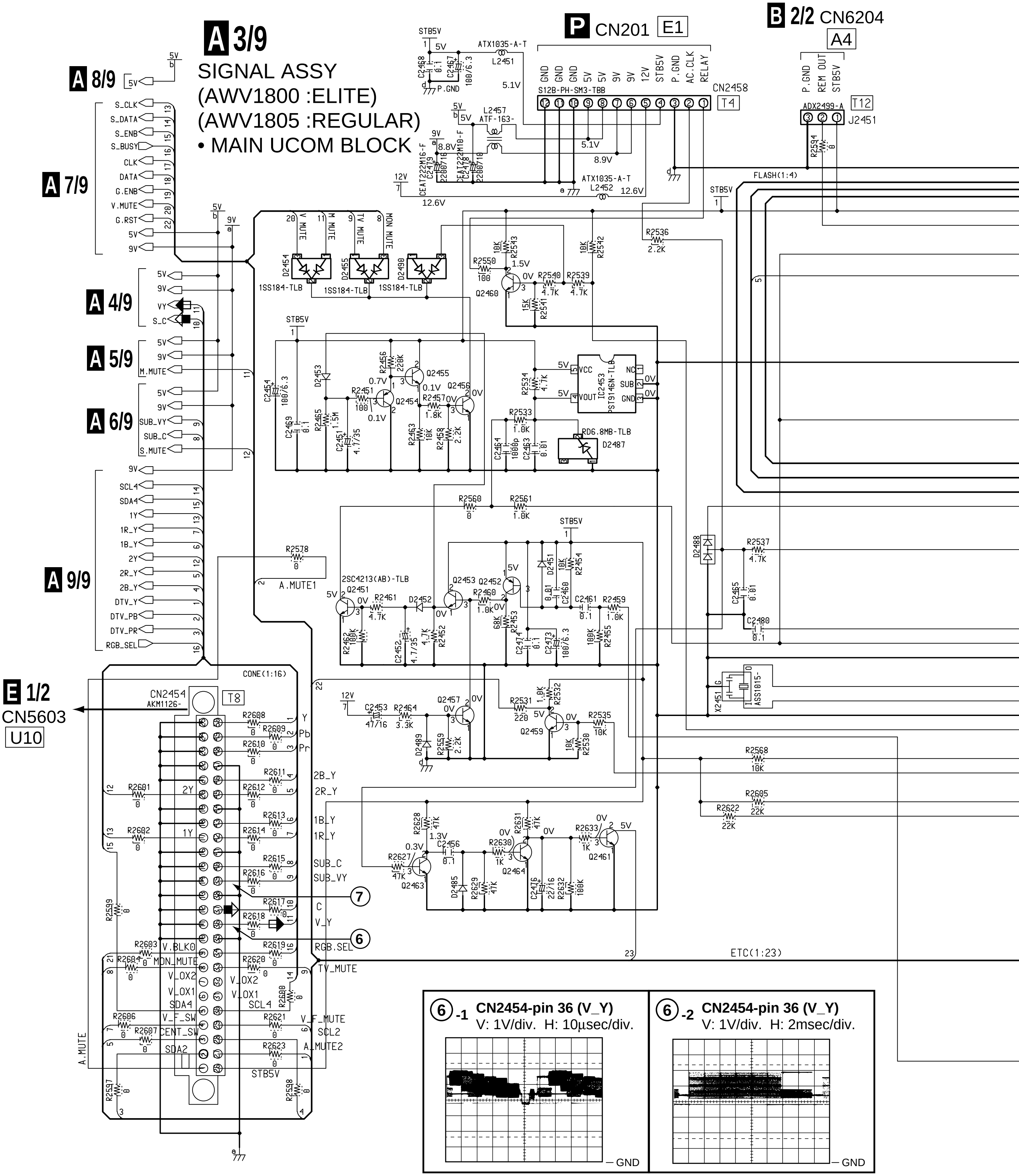

A 1/9
2705
ADE1171-A
FROM RF SW
2801
AXF1084-
AGC
TV
ADD
SCL
SDA
BPL
LOCK
BTL
IF1
IF
BV
AU
GND
AFT
VI
4.4V
5.5V
31.8V
5.1V
9V
5.1V
9V
4.8V
0V
2.4V
4.6V
1±0.25Vp-p Bias 4V
Typ 2mA Max 4mA
L2802
2.2
C2819
0.01
C2818
10/50
R2801
220
R2802
220
IF
K2801
AKC1002-
Typ 20mA Max 30mA
L2801
2.2
C2815
10/16
C2816
0.01
D2802
D2801
L2803
C2808
C2809
470/10
C2804
0.01
C2801
470/10
C2805
0.01
Typ 74mA Max 99mA
Typ 64mA Max 79mA
8mA
1 Vp-p Bias 4.9-6.9V
R2805
470
VR2801
VCP1088-A-TRB
470
R2806
18K
Video Buffer
Q2802
C2804
10/16
C2806
0.01
D2805
Video Amp. (level adjust 1Vp-p) Q2801
(TV2)
R2817
220
R2829
100
C2810
470/10
R2803
680
R2833
100
Bias 3.6 V
R2804
680
R2807
12K
C2803
10/16
R2808
2.7K
+9V REG2
9V
H sync Detect
1mA
IC2801 PQ20VZ1U
10.4V
VIN
VO
5.5V
VC
VADJ
GND
R2834
6.2K
RN
1.25V
R2837
1K
RN
+9V Regulator
C2817
0.01
C2814
220/10
AFT OUTPUT
1.2mA
Q2806
R2818
10K
R2822
220
3.1V
2.4V
Q2805
R2819
100
DC 2.4±0.5 V
R2823
3.9K
R2838
4.7K
0.86mA
Q2809
R2839
220
4.1V
C2822
100p
R2840
2.2K
R2841
2.2K
R2811
15K
C2802
10/16
R2814
18K
R2816
1.0K
R2820
6.8K
R2809
220
Q2804
R2810
560
R2821
220
Q2803
C2811
47p
C2807
1000p
R2812
1.5K
R2813
5.6K
R2815
22K
C2812
1000p
0.8Vp-p
4.9Vp-p
fH
H sync signal
4.9Vp-p
AFT OUTPUT VOLTAGE DC 2.4±0.5V
A 3/9
H_SYNC2
AFT2
A 1/9
NC
TV_MUTE2
TV2-AU
TV2-V
(C)
(TV2)
VIDEO Signal 1 Vp-p Bias 4.8-6.4 V
1 Vp-p Bias 4.3-6.3 V

1.RESISTERS indicated in 1/2W,1/4W,1/10W,1WFL,2WFL 5% tolerance unless otherwise noted K;kΩ , M;MΩ (F)+1% , (G)+2% , (K)+10% , (M)+20% tolerance

2.CAPACITORS indicated in capasity (uF)/(V) unless otherwise noted pF indicated without voltage is 50V except electrolytic capacitor

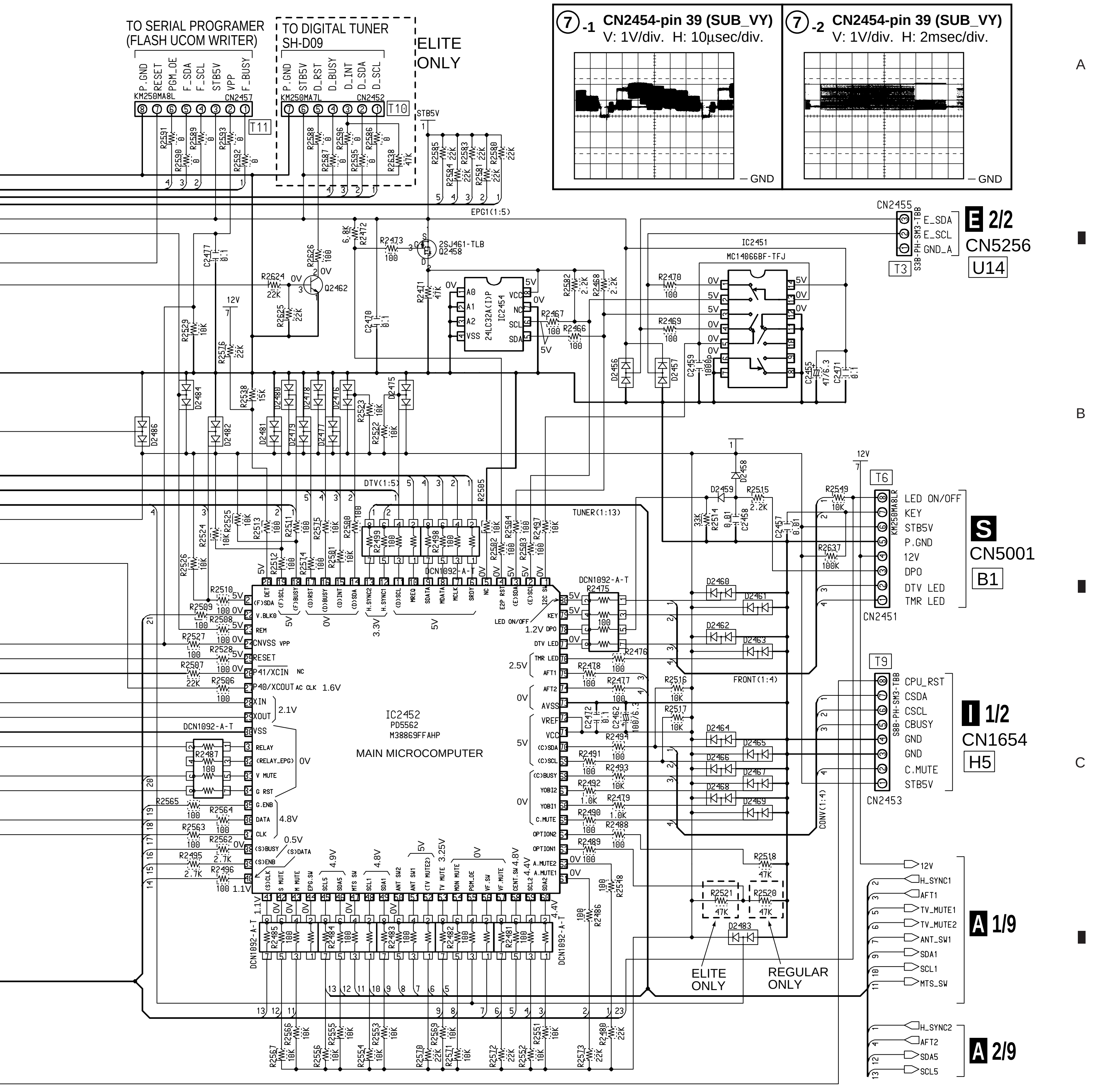

2SA1162(YGR)-TLB
1
2
3
2SC2712(YGR)-TLB
2
1
3
1SS226-TRB

3.5 SIGNAL ASSY (3/9)


A 3/9
SIGNAL ASSY
(AWV1800 :ELITE)
(AWV1805 :REGULAR)
• MAIN UCOM BLOCK
P CN201 E1
B 2/2 CN6204 A4
CN2458 T4
S12B-PH-SM3-TBB
GND GND GND 5V 5V 9V 9V 12V STB5V P.GND AC.CLK RELAY
P.GND REM OUT STB5V
ADX2499-A T12
J2451
ATX1035-A-T L2451
L2457 ATF-163-
ATX1035-A-T L2452
C2468 0.1
C2467 100/6.3
C2479 CEAT222M16-F
C2478 CEAT222M16-F
STB5V
5.1V
8.8V
8.9V
12.6V
FLASH(1:4)
R2594 0
R2536 2.2K
A 8/9
A 7/9
S_CLK
S_DATA
S_ENB
S_BUSY
CLK
DATA
G.ENB
V.MUTE
G.RST
5V
9V
A 4/9
VY
S_C
A 5/9
M.MUTE
A 6/9
SUB_VY
SUB_C
S.MUTE
A 9/9
SCL4
SDA4
1Y
1R_Y
1B_Y
2Y
2R_Y
2B_Y
DTV_Y
DTV_PB
DTV_PR
RGB_SEL
V MUTE
M MUTE
TV MUTE
MON MUTE
D2454
D2455
D2490
1SS184-TLB
R2550 100
R2543 10K
R2542 10K
Q2460
R2540 4.7K
R2539 4.7K
R2541 15K
1.5V
0V
IC2453
PST9146N-TLB
VCC
VOUT
NC
SUB
GND
R2534 4.7K
R2533 1.0K
C2464 1000p
C2463 0.01
RD6.8MB-TLB
D2487
C2454 100/6.3
C2469 0.1
D2453
R2465 1.5M
R2451 100
C2451 4.7/35
Q2454
Q2455
Q2456
R2456 220K
R2457 1.8K
R2463 10K
R2458 2.2K
0.7V
0.1V
R2560 0
R2561 1.0K
R2578 0
A.MUTE1
2SC4213(AB)-TLB
Q2451
Q2452
Q2453
R2461 4.7K
D2452
R2460 1.0K
R2453 68K
R2462 100K
C2452 4.7/35
R2452 4.7K
D2451
R2454 10K
C2460 0.01
C2461 0.1
R2459 1.0K
C2474 0.1
C2473 100/6.3
R2455 100K
D2488
R2537 4.7K
C2465 0.01
C2480 0.1
X2451
ASS1015-
E 1/2
CN5603
U10
CN2454
AKM1126-
T8
CONE(1:16)
R2608 0
R2609 0
R2610 0
R2611 0
R2612 0
R2613 0
R2614 0
R2615 0
R2616 0
R2617 0
R2618 0
R2619 0
R2620 0
R2621 0
R2623 0
R2601 0
R2602 0
R2603 0
R2604 0
R2606 0
R2607 0
R2599 0
R2600 0
R2597 0
R2598 0
Y
Pb
Pr
2B_Y
2R_Y
1B_Y
1R_Y
SUB_C
SUB_VY
C
V_Y
RGB_SEL
TV_MUTE
V_F_MUTE
SCL2
A_MUTE2
V.BLK0
MON_MUTE
V_OX2
V_OX1
SDA4
SCL4
V_F_SW
CENT_SW
SDA2
A.MUTE
STB5V
7
6
C2453 47/16
R2464 3.3K
Q2457
R2559 2.2K
D2489
R2531 220
R2532 1.0K
Q2459
R2535 10K
R2530 10K
R2568 10K
R2605 22K
R2622 22K
R2628 47K
C2456 0.1
R2627 47K
Q2463
D2485
R2629 47K
R2630 1K
R2631 47K
Q2464
C2476 22/16
R2632 100K
R2633 1K
Q2461
1.3V
0.3V
ETC(1:23)

6-1 CN2454-pin 36 (V_Y)
V: 1V/div. H: 10µsec/div.
GND

6-2 CN2454-pin 36 (V_Y)
V: 1V/div. H: 2msec/div.
GND



⑦-1 CN2454-pin 39 (SUB_VY)
V: 1V/div. H: 10µsec/div.

⑦-2 CN2454-pin 39 (SUB_VY)
V: 1V/div. H: 2msec/div.

GND
GND
TO SERIAL PROGRAMER (FLASH UCOM WRITER)
P.GND
RESET
PGM_OE
F_SDA
F_SCL
STB5V
VPP
F_BUSY
KM250MA8L
CN2457
T11
TO DIGITAL TUNER SH-D09
P.GND
STB5V
D_RST
D_BUSY
D_INT
D_SDA
D_SCL
KM250MA7L
CN2452
T10
ELITE ONLY
STB5V
EPG1(1:5)
2SJ461-TLB
Q2458
Q2462
IC2454
24LC32A(I)P
A0
A1
A2
VSS
VCC
NC
SCL
SDA
IC2451
MC14066BF-TFJ
CN2455
E_SDA
E_SCL
GND_A
S3B-PH-SM3-TBB
T3
E 2/2
CN5256
U14
DTV(1:5)
TUNER(1:13)
IC2452
PD5562
M38869FFAHP
MAIN MICROCOMPUTER
DCN1092-A-T
FRONT(1:4)
CONV(1:4)
T6
LED ON/OFF
KEY
STB5V
P.GND
12V
DPO
DTV LED
TMR LED
KM250MA8LR
CN2451
S
CN5001
B1
T9
CPU_RST
CSDA
CSCL
CBUSY
GND
GND
C.MUTE
STB5V
S8B-PH-SM3-TBB
CN2453
I 1/2
CN1654
H5
12V
H_SYNC1
AFT1
TV_MUTE1
TV_MUTE2
ANT_SW1
SDA1
SCL1
MTS_SW
A 1/9
H_SYNC2
AFT2
SDA5
SCL5
A 2/9
ELITE ONLY
REGULAR ONLY
A
B
C
D

Notes
1.RESISTORS
Indicated in Ω
tolerance unless otherwise noted k kΩ
2.CAPASITORS
Indicated in capacity(uF)/Voltage unless otherwise noted p pF
Indication without voltage is 50V
except electrolytic capacitor.

2SC2712(YGR)-TLB
2SA1162(YGR)-TLB
1SS352-TRB
1SS226-TRB

SUB SUFFIX

1	2	3	4	5
R2691	R2692	R2693	R2694	R2695
6	7	8	9	0
R2696	R2697	R2698	R2699	R2700

R2688 ELITE R2689 REGULAR

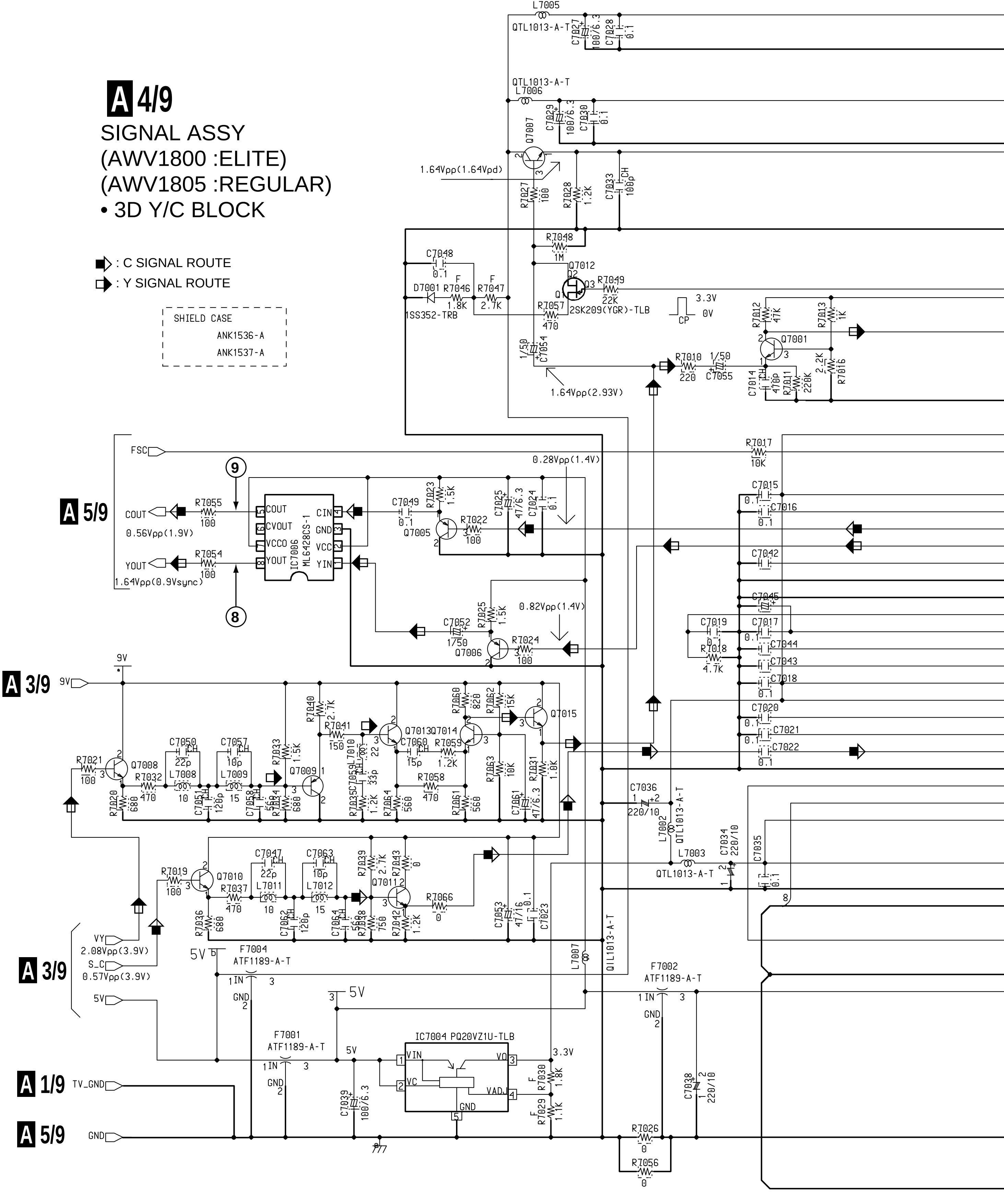
▶ : C SIGNAL ROUTE
▷ : Y SIGNAL ROUTE

3.6 SIGNAL ASSY (4/9)

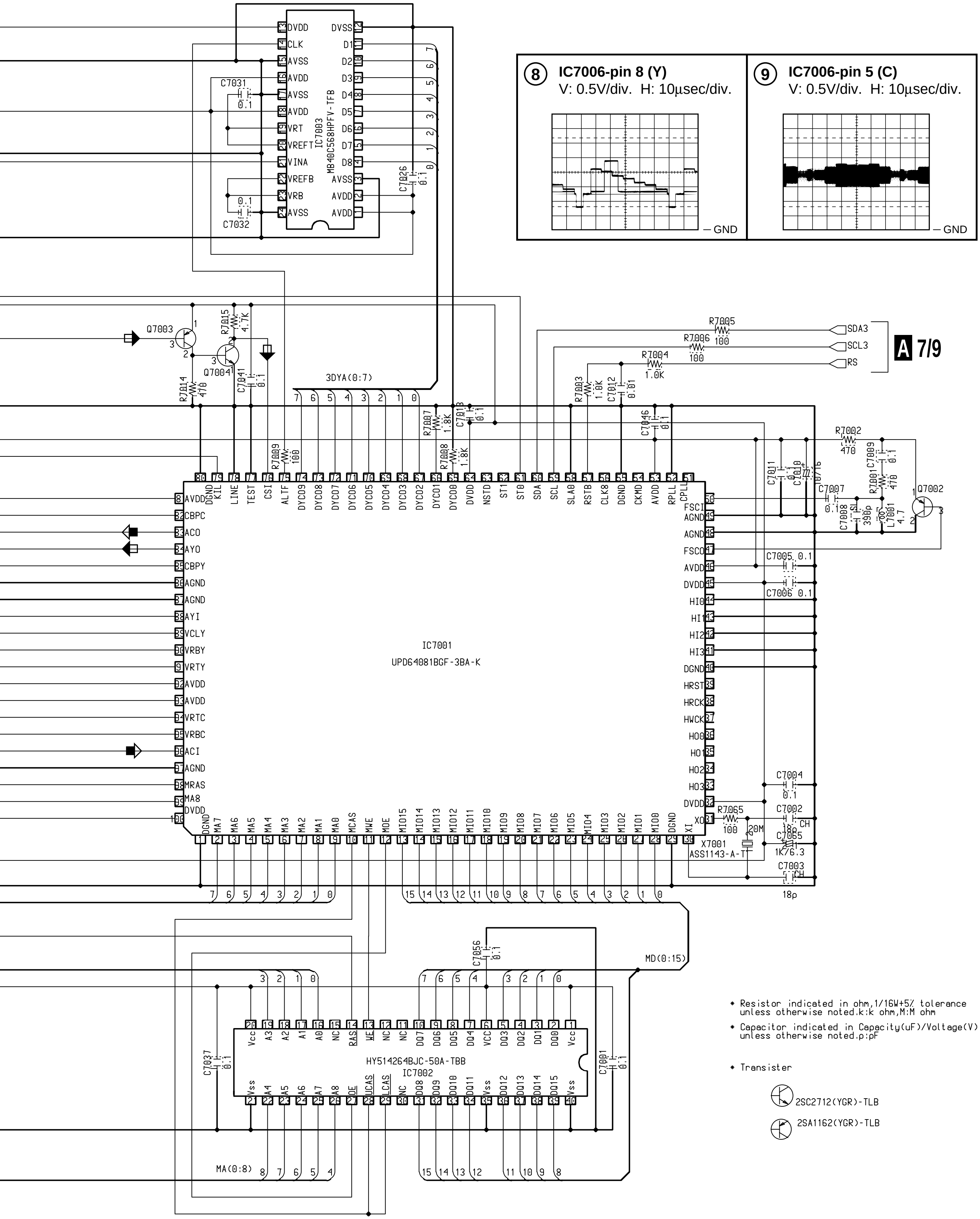
A 4/9

SIGNAL ASSY
(AWV1800 :ELITE)
(AWV1805 :REGULAR)
• 3D Y/C BLOCK

■▷ : C SIGNAL ROUTE
□▷ : Y SIGNAL ROUTE



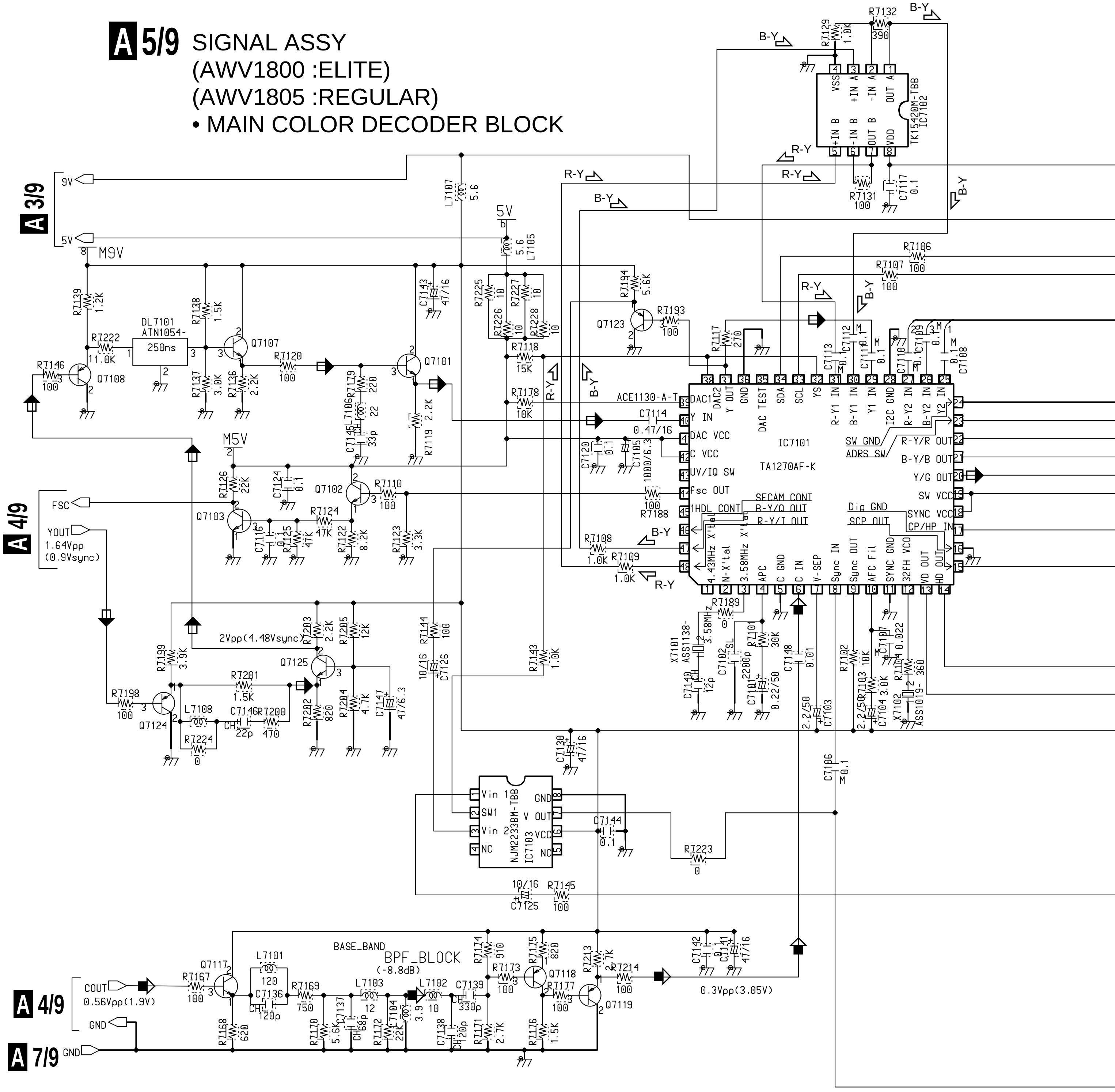
SHIELD CASE
ANK1536-A
ANK1537-A
L7005
QTL1013-A-T
C7027 100/6.3
C7028 0.1
L7006
C7029 100/6.3
C7030 0.1
Q7007
1.64Vpp(1.64Vpd)
R7027 100
R7028 1.2K
C7033 CH 100p
R7048 1M
C7048 0.1
D7001 1SS352-TRB
R7046 1.8K
R7047 2.7K
Q7012 2SK209(YGR)-TLB
R7049 22K
R7057 470
3.3V
0V
CP
C7054 1/50
1.64Vpp(2.93V)
R7010 220
C7055 1/50
R7012 47K
R7013 1K
Q7001
C7014 CH 470p
R7011 220K
R7016 2.2K
FSC
R7017 10K
A 5/9
COUT
0.56Vpp(1.9V)
YOUT
1.64Vpp(0.9Vsync)
R7055 100
R7054 100
9
8
IC7006 ML6428CS-1
COUT
CVOUT
VCCO
YOUT
CIN
GND
VCC
YIN
0.28Vpp(1.4V)
C7049 0.1
R7023 1.5K
Q7005
R7022 100
C7025 47/6.3
C7024 0.1
C7015 0.1
C7016 0.1
C7042
C7045
C7019 0.1
C7017 0.1
R7018 4.7K
C7044
C7043
C7018 0.1
C7020 0.1
C7021
C7022 0.1
0.82Vpp(1.4V)
C7052 1/50
R7025 1.5K
Q7006
R7024 100
A 3/9
9V
R7021 100
Q7008
R7032 470
R7020 680
C7050 CH 22p
L7008 10
C7051 CH 120p
C7057 CH 10p
L7009 15
C7058 CH 560
R7033 1.5K
R7034 680
Q7009
R7040 2.7K
R7041 150
L7010 CH 22
C7059 33p
R7035 1.2K
Q7013
C7060 CH 15p
R7064 560
R7058 470
Q7014
R7060 820
R7062 15K
R7059 1.2K
R7063 10K
R7061 560
Q7015
R7031 1.0K
C7061 47/6.3
C7036 220/10
L7002 QTL1013-A-T
L7003 QTL1013-A-T
C7034 220/10
C7035 0.1
R7019 100
Q7010
R7037 470
R7036 680
C7047 CH 22p
L7011 10
C7062 CH 120p
C7063 CH 10p
L7012 15
C7064 CH 56p
R7039 2.7K
R7043 0
Q7011
R7038 750
R7042 1.2K
R7066 0
C7053 47/16
C7023 0.1
VY
2.08Vpp(3.9V)
S_C
0.57Vpp(3.9V)
5V
5V
F7004 ATF1189-A-T
IN GND
L7007 QTL1013-A-T
F7002 ATF1189-A-T
F7001 ATF1189-A-T
5V
IC7004 PQ20VZ1U-TLB
VIN
VO
VC
VADJ
GND
3.3V
R7030 1.8K
R7029 1.1K
C7039 100/6.3
C7038 220/10
A 1/9
TV_GND
A 5/9
GND
R7026 0
R7056 0


⑧ IC7006-pin 8 (Y)
V: 0.5V/div. H: 10µsec/div.
GND
⑨ IC7006-pin 5 (C)
V: 0.5V/div. H: 10µsec/div.
GND
IC7003
MB40C568HPFV-TFB
DVDD DVSS CLK D1 AVSS D2 AVDD D3 AVSS D4 AVDD D5 VRT D6 VREFT D7 VINA D8 VREFB AVSS VRB AVDD AVSS AVDD
C7031 0.1
C7032 0.1
C7026 0.1
Q7003
Q7004
R7015 4.7K
R7014 470
C7041 0.1
3DYA(0:7)
R7009 100
R7007 1.8K
R7008 1.8K
C7013 0.1
R7005 100
R7006 100
R7004 1.0K
SDA3
SCL3
RS
A 7/9
R7003 1.0K
C7012 0.01
C7046 0.1
R7002 470
C7009 0.1
R7001 470
C7011 0.1
C7010 0.1
C7016 10/16
C7007 0.1
C7008 0.1
SL 390p
L7001 4.7
Q7002
C7005 0.1
C7006 0.1
C7004 0.1
R7065 100
20M
C7002 18p CH
C7065 1K/6.3
C7003 18p CH
X7001
ASS1143-A-T
IC7001
UPD64081BGF-3BA-K
DGND KIL LINE TEST CSI ALTF DYCO9 DYCO8 DYCO7 DYCO6 DYCO5 DYCO4 DYCO3 DYCO2 DYCO1 DYCO0 DVDD NSTD ST1 ST0 SDA SCL SLA0 RSTB CLK8 DGND CKMD AVDD RPLL CPLL
AVDD CBPC ACO AYO CBPY AGND AGND AYI VCLY VRBY VRTY AVDD AVDD VRTC VRBC ACI AGND MRAS MA8 DVDD
FSCI AGND AGND FSCO AVDD DVDD HI0 HI1 HI2 HI3 DGND HRST HRCK HWCK HO0 HO1 HO2 HO3 DVDD XO XI
DGND MA7 MA6 MA5 MA4 MA3 MA2 MA1 MA0 MCAS MWE MOE MIO15 MIO14 MIO13 MIO12 MIO11 MIO10 MIO9 MIO8 MIO7 MIO6 MIO5 MIO4 MIO3 MIO2 MIO1 MIO0 DGND
MD(0:15)
C7056 0.1
IC7002
HY514264BJC-50A-TBB
Vcc A3 A2 A1 A0 NC RAS WE NC NC DQ7 DQ6 DQ5 DQ4 VCC DQ3 DQ2 DQ1 DQ0 Vcc
Vss A4 A5 A6 A7 A8 OE UCAS LCAS NC DQ8 DQ9 DQ10 DQ11 Vss DQ12 DQ13 DQ14 DQ15 Vss
C7037 0.1
C7001 0.1
MA(0:8)
2SC2712(YGR)-TLB
2SA1162(YGR)-TLB
A B C D

- Resistor indicated in ohm,1/16W±5% tolerance unless otherwise noted.k:k ohm,M:M ohm
- Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF
- Transister

3.7 SIGNAL ASSY (5/9)

A 5/9 SIGNAL ASSY
(AWV1800 :ELITE)
(AWV1805 :REGULAR)
• MAIN COLOR DECODER BLOCK


A
B
C
D
A 3/9
9V
5V
M9V
A 4/9
FSC
YOUT
1.64Vpp
(0.9Vsync)
A 4/9
COUT
0.56Vpp(1.9V)
GND
A 7/9
GND
DL7101
ATN1054-
250ns
R7139 1.2K
R7222 11.0K
R7146 100
Q7108
R7138 1.5K
R7137 3.0K
R7136 2.2K
Q7107
R7120 100
R7179 220
L7106 22
C7145 33p
Q7101
R7119 2.2K
C7143 47/16
L7107 5.6
L7105 5.6
5V
R7225 10
R7226 10
R7227 10
R7228 10
R7118 15K
R7178 10K
R7194 5.6K
Q7123
R7193 100
R7117 270
M5V
R7126 22K
C7124 0.1
Q7102
R7110 100
Q7103
C7116 0.1
R7125 47K
R7124 47K
R7122 8.2K
R7123 3.3K
R7108 1.0K
R7109 1.0K
R7188 100
C7114 0.47/16
C7120 0.1
C7105 1000/6.3
ACE1130-A-T
IC7101
TA1270AF-K
DAC1
DAC2
Y OUT
GND
DAC TEST
SDA
SCL
YS
R-Y1 IN
B-Y1 IN
Y1 IN
I2C GND
R-Y2 IN
B-Y2 IN
Y2 IN
Y IN
DAC VCC
C VCC
UV/IQ SW
fsc OUT
1HDL CONT
SECAM CONT
B-Y/Q OUT
R-Y/I OUT
4.43MHz X'tal
N-X'tal
3.58MHz X'tal
APC
C GND
C IN
V-SEP
Sync IN
Sync OUT
AFC Fil
SYNC GND
32FH VCO
VD OUT
HD OUT
SW GND
ADRS SW
R-Y/R OUT
B-Y/B OUT
Y/G OUT
SW VCC
Dig GND
SCP OUT
SYNC VCC
CP/HP IN
C7113 0.1
C7112 0.1 M
C7111 0.1 M
C7110 0.1
C7109 0.1 M
C7108 0.1 M
R7106 100
R7107 100
R7129 1.0K
R7132 390
IC7102
TK15420M-TBB
VSS
+IN A
-IN A
OUT A
+IN B
-IN B
OUT B
VDD
R7131 100
C7117 0.1
R-Y
B-Y
R7189 0
X7101 ASS1138- 3.58MHz
C7140 CH 12p
C7102 SL 2200p
R7101 30K
C7101 0.22/50
C7148 0.01
C7103 2.2/50
R7102 10K
R7103 3.0K
C7104 2.2/50
C7107 0.022
R7104 360
X7102 ASS1019-
C7106 M 0.1
2Vpp(4.48Vsync)
R7199 3.9K
R7198 100
Q7124
L7108
R7224 0
R7201 1.5K
C7146 CH 22p
R7200 470
Q7125
R7203 2.2K
R7205 12K
R7202 820
R7204 4.7K
C7147 47/6.3
R7144 100
C7126 10/16
R7143 1.0K
C7130 47/16
IC7103
NJM2233BM-TBB
Vin 1
SW1
Vin 2
NC
GND
V OUT
VCC
NC
C7144 0.1
R7223 0
C7125 10/16
R7145 100
BASE_BAND
BPF_BLOCK
(-8.8dB)
Q7117
R7167 100
R7168 620
L7101 120
C7136 CH 120p
R7169 750
R7170 5.6K
C7137 CH 68p
L7103 12
R7172 22K
C7104
L7102 10
3.9
C7139 CH 330p
C7138 CH 20p
R7171 2.7K
R7174 910
R7173 100
Q7118
R7175 820
R7177 100
R7176 1.5K
R7213 2.7K
R7214 100
Q7119
C7142 0.1
C7141 47/16
0.3Vpp(3.05V)

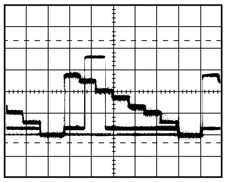
- Resistor indicated in ohm,1/16W+5% tolerance unless otherwise noted.k:k ohm,M:M ohm
- Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF

- Transister
  - 2SC2712(YGR)-TLB
  - 2SA1162(YGR)-TLB

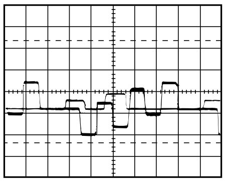
1/16W

➡ : C SIGNAL ROUTE
⇨ : Y SIGNAL ROUTE
R-Y : R-Y SIGNAL ROUTE
B-Y : B-Y SIGNAL ROUTE

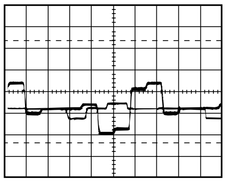
⑩ Q7115-Emitter (MY) (AC)
V: 0.2V/div. H: 10µsec/div.

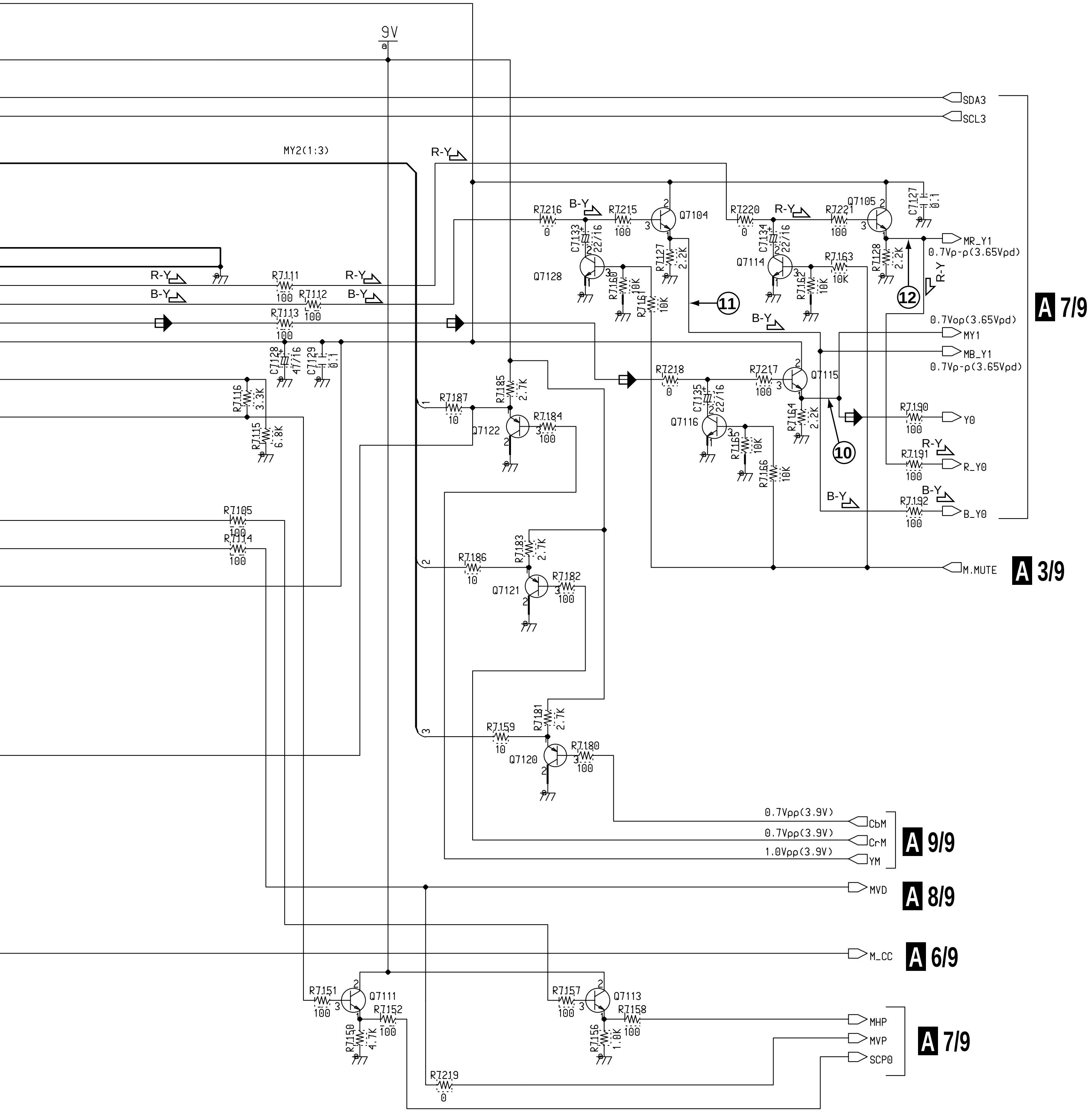


⑪ Q7104-Emitter (MB-Y) (AC)
V: 0.2V/div. H: 10µsec/div.

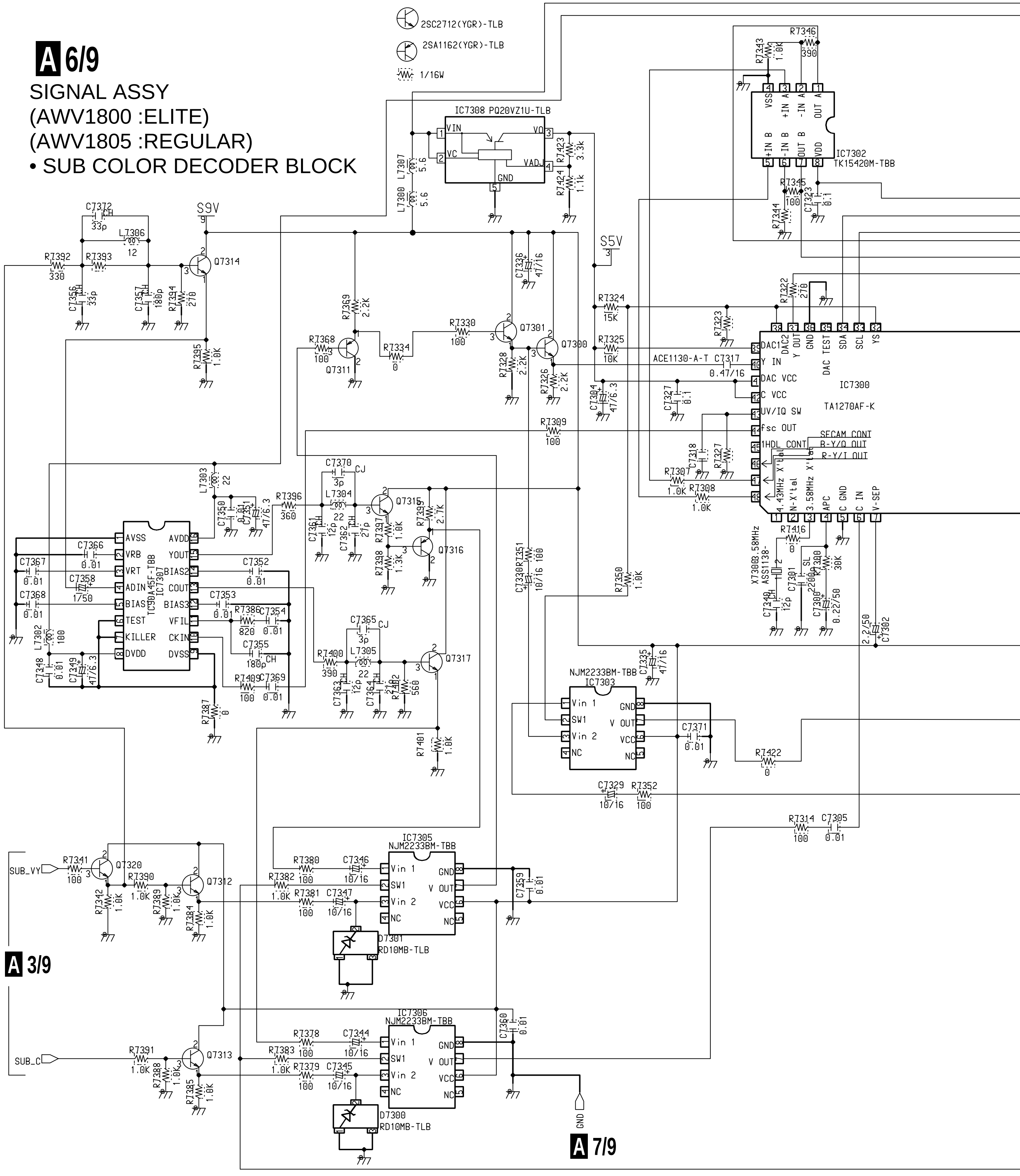


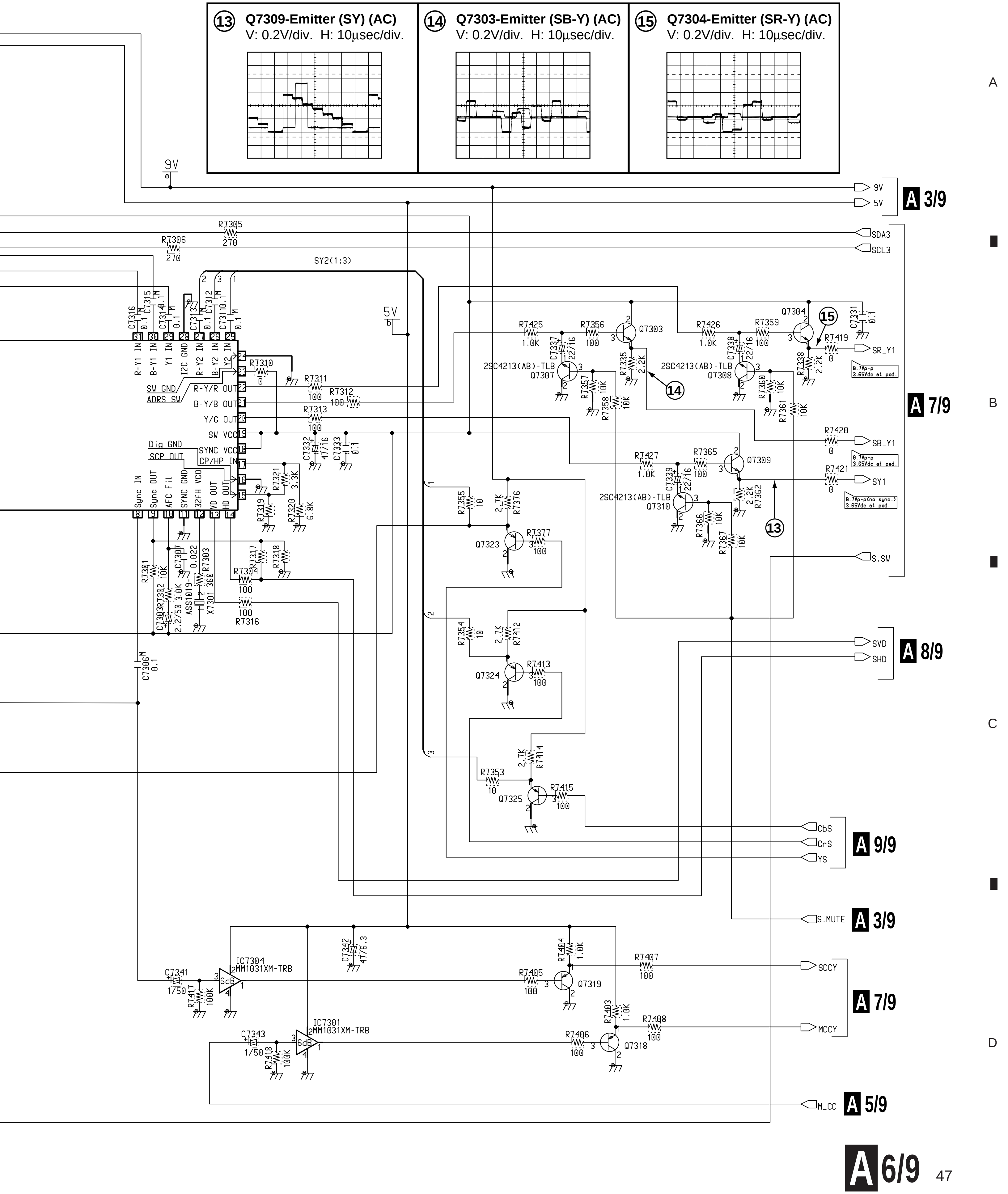
⑫ Q7105-Emitter (MR-Y) (AC)
V: 0.2V/div. H: 10µsec/div.




9V
a
SDA3
SCL3
MY2(1:3)
R-Y
B-Y
R7216
0
R7215
100
Q7104
R7220
0
R7221
100
Q7105
C7127
0.1
MR_Y1
0.7Vp-p(3.65Vpd)
C7133
22/16
Q7128
R7160
10K
R7161
10K
R7127
2.2K
C7134
22/16
Q7114
R7163
10K
R7162
10K
R7128
2.2K
⑪
⑫
A 7/9
R7111
100
R7112
100
R7113
100
C7128
47/16
C7129
0.1
0.7Vop(3.65Vpd)
MY1
MB_Y1
0.7Vp-p(3.65Vpd)
R7218
0
R7217
100
Q7115
C7135
22/16
Q7116
R7164
2.2K
R7165
10K
R7166
10K
R7116
3.3K
R7115
6.8K
R7187
10
R7185
2.7K
Q7122
R7184
100
R7190
100
Y0
⑩
R7191
100
R_Y0
R7192
100
B_Y0
R7105
100
R7114
100
M.MUTE
A 3/9
R7186
10
R7183
2.7K
Q7121
R7182
100
R7159
10
R7181
2.7K
Q7120
R7180
100
0.7Vpp(3.9V)
CbM
0.7Vpp(3.9V)
CrM
1.0Vpp(3.9V)
YM
A 9/9
MVD
A 8/9
M_CC
A 6/9
R7151
100
Q7111
R7152
100
R7150
4.7K
R7157
100
Q7113
R7158
100
R7156
1.0K
MHP
MVP
SCP0
A 7/9
R7219
0

3.8 SIGNAL ASSY (6/9)


A
B
C
D
A 6/9
SIGNAL ASSY
(AWV1800 :ELITE)
(AWV1805 :REGULAR)
• SUB COLOR DECODER BLOCK
2SC2712(YGR)-TLB
2SA1162(YGR)-TLB
1/16W
IC7308 PQ20VZ1U-TLB
VIN
VO
VC
VADJ
GND
IC7302
TK15420M-TBB
VSS
+IN A
-IN A
OUT A
+IN B
-IN B
OUT B
VDD
R7346 390
R7343 1.0K
R7345 100
R7344
C7323 0.1
R7423 3.3k
R7424 1.1k
L7307 5.6
L7300 5.6
S9V
S5V
C7372 CH 33p
L7306 12
R7392 330
R7393
Q7314
C7356 CH 33p
C7357 CH 180p
R7394 270
R7395 1.0K
C7336 47/16
R7369 2.2K
R7368 100
Q7311
R7334 0
R7330 100
Q7301
Q7300
R7328 2.2K
R7326 2.2K
R7324 15K
R7325 10K
R7322 270
R7323
ACE1130-A-T C7317 0.47/16
C7304 47/6.3
C7327 0.1
R7309 100
C7318
R7327
R7307 1.0K
R7308 1.0K
IC7300
TA1270AF-K
DAC1
DAC2
Y OUT
GND
DAC TEST
SDA
SCL
YS
Y IN
DAC VCC
C VCC
UV/IQ SW
fsc OUT
1HDL CONT
SECAM CONT
B-Y/Q OUT
R-Y/I OUT
4.43MHz X'tal
N-X'tal
3.58MHz X'tal
APC
C GND
C IN
V-SEP
R7416
X7300 3.58MHz ASS1138-
C7340 12p
C7301 SL 2200p
R7300 30K
C7300 0.22/50
C7302 2.2/50
L7303 22
C7350 0.01
C7351 47/6.3
R7396 360
C7370 CJ 3p
L7304 22
Q7315
C7361 CH 12p
C7362 CH 27p
R7397 1.0K
R7399 2.7K
R7398 1.3K
Q7316
IC7307 TC90A45F-TBB
AVSS
AVDD
VRB
YOUT
VRT
BIAS2
ADIN
COUT
BIAS
BIAS3
TEST
VFIL
KILLER
CKIN
DVDD
DVSS
C7366 0.01
C7367 0.01
C7358 1/50
C7368 0.01
C7352 0.01
C7353 0.01
R7386 820
C7354 0.01
C7355 CH 180p
R7409 100
C7369 0.01
L7302 100
C7348 0.01
C7349 47/6.3
R7387 0
C7365 CJ 3p
L7305 22
R7400 390
Q7317
C7363 CH 12p
C7364 CH 12p
R7402 560
R7401 1.0K
C7330 10/16
R7351 100
R7350 1.0K
C7335 47/16
NJM2233BM-TBB IC7303
Vin 1
SW1
Vin 2
NC
GND
V OUT
VCC
C7371 0.01
R7422 0
C7329 10/16
R7352 100
R7314 100
C7305 0.01
IC7305 NJM2233BM-TBB
R7380 100
C7346 10/16
R7382 1.0K
R7381 100
C7347 10/16
C7359 0.01
D7301 RD10MB-TLB
SUB_VY
R7341 100
Q7320
R7342 1.0K
R7390 1.0K
R7389 1.0K
Q7312
R7384 1.0K
A 3/9
IC7306 NJM2233BM-TBB
C7360 0.01
R7378 100
C7344 10/16
R7383 1.0K
R7379 100
C7345 10/16
D7300 RD10MB-TLB
SUB_C
R7391 1.0K
R7388 1.0K
Q7313
R7385 1.0K
GND
A 7/9


⑬ **Q7309-Emitter (SY) (AC)**
V: 0.2V/div. H: 10μsec/div.

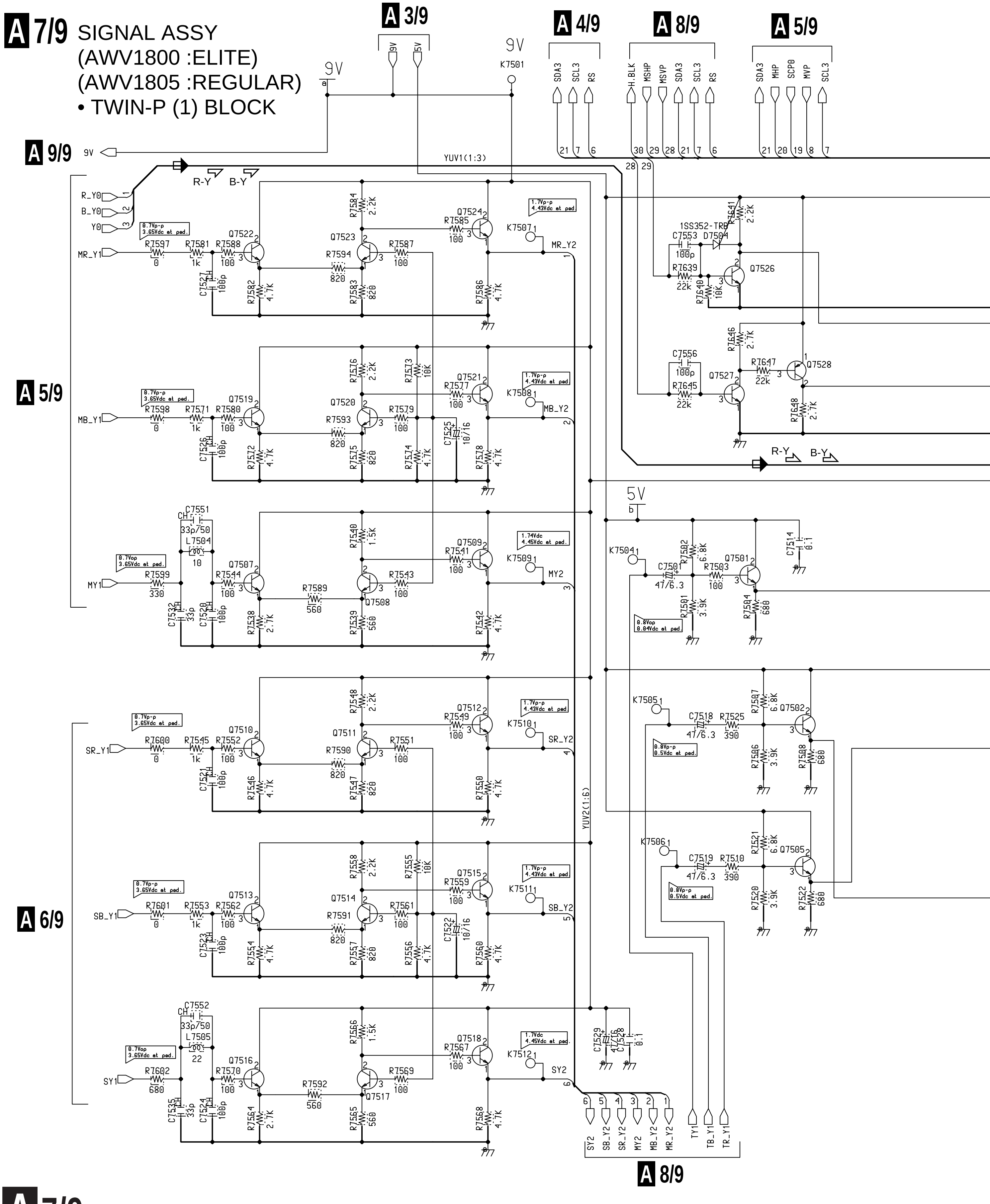
⑭ **Q7303-Emitter (SB-Y) (AC)**
V: 0.2V/div. H: 10μsec/div.

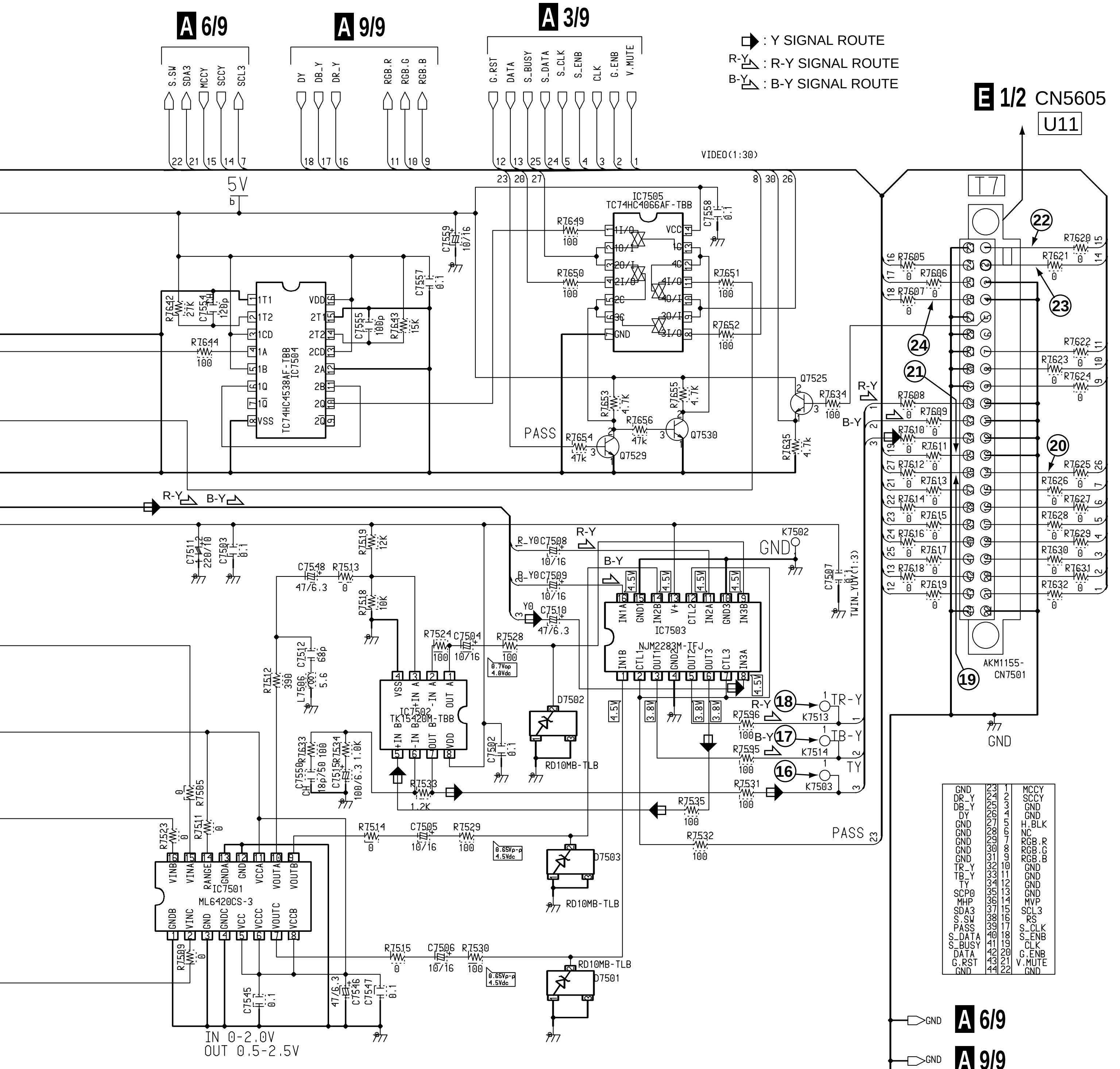
⑮ **Q7304-Emitter (SR-Y) (AC)**
V: 0.2V/div. H: 10μsec/div.

9V
5V
A 3/9
SDA3
SCL3
R7305 270
R7306 270
SY2(1:3)
C7316 0.1 M
C7315 0.1 M
C7314 0.1 M
C7313
C7312 0.1 M
C7311 0.1 M
R-Y1 IN
B-Y1 IN
Y1 IN
I2C GND
R-Y2 IN
B-Y2 IN
Y2 IN
SW GND
ADRS SW
R-Y/R OUT
B-Y/B OUT
Y/G OUT
SW VCC
Dig GND
SCP OUT
SYNC VCC
CP/HP IN
Sync IN
Sync OUT
AFC Fil
SYNC GND
32FH VCO
VD OUT
HD OUT
R7310 0
R7311 100
R7312 100
R7313 100
C7332 47/16
C7333 0.1
R7321 3.3K
R7319
R7320 6.8K
R7301
R7302 10K
C7303 2.2/50
C7301 3.0K
0.022
R7303 360
ASS1019-
X7301
R7304 100
R7317
R7318
R7316 100
C7306 0.1 M
R7425 1.0K
R7356 100
Q7303
C7337 22/16
2SC4213(AB)-TLB
Q7307
R7335 2.2K
R7357 10K
R7358 10K
R7426 1.0K
R7359 100
Q7304
C7338 22/16
2SC4213(AB)-TLB
Q7308
R7360 10K
R7361 10K
R7338 2.2K
C7331 0.1
R7419 0
SR_Y1
0.7Vp-p 3.65Vdc at ped.
R7420 0
SB_Y1
0.7Vp-p 3.65Vdc at ped.
A 7/9
R7427 1.0K
R7365 100
Q7309
C7339 22/16
2SC4213(AB)-TLB
Q7310
R7362 2.2K
R7366 10K
R7367 10K
R7421 0
SY1
0.7Vp-p(no sync.) 3.65Vdc at ped.
S.SW
R7355 10
R7376 2.7K
Q7323
R7377 100
R7354 10
R7412 2.7K
Q7324
R7413 100
SVD
SHD
A 8/9
R7414 2.7K
R7353 10
Q7325
R7415 100
CbS
CrS
YS
A 9/9
S.MUTE
A 3/9
C7342 47/6.3
IC7304 MM1031XM-TRB
6dB
C7341 1/50
R7417 100K
R7404 1.0K
R7405 100
Q7319
R7407 100
SCCY
A 7/9
R7403 1.0K
R7408 100
MCCY
IC7301 MM1031XM-TRB
6dB
C7343 1/50
R7418 100K
R7406 100
Q7318
M_CC
A 5/9

3.9 SIGNAL ASSY (7/9)

A 7/9 SIGNAL ASSY
(AWV1800 :ELITE)
(AWV1805 :REGULAR)
• TWIN-P (1) BLOCK


A 3/9
9V
5V
9V
K7501
A 4/9
SDA3
SCL3
RS
A 8/9
H.BLK
MSHP
MSVP
SDA3
SCL3
RS
A 5/9
SDA3
MHP
SCP0
MVP
SCL3
A 9/9
9V
YUV1(1:3)
R-Y
B-Y
R_Y0
B_Y0
Y0
MR_Y1
0.7Vp-p 3.65Vdc at ped.
R7597 0
R7581 1k
R7588 100
Q7522
C7527 CH 100p
R7582 4.7K
R7584 2.2K
Q7523
R7594 820
R7583 820
R7587 100
Q7524
R7585 100
R7586 4.7K
K7507
1.7Vp-p 4.43Vdc at ped
MR_Y2
A 5/9
MB_Y1
R7598 0
R7571 1k
R7580 100
Q7519
C7526 CH 100p
R7572 4.7K
R7576 2.2K
R7573 10K
Q7520
R7593 820
R7575 820
R7579 100
R7574 4.7K
C7525 10/16
Q7521
R7577 100
R7578 4.7K
K7508
MB_Y2
MY1
R7599 330
C7551 CH 33p/50
L7504 10
Q7507
R7544 100
C7532 CH 33p
C7520 CH 100p
R7538 2.7K
R7540 1.5K
R7589 560
Q7508
R7543 100
R7539 560
Q7509
R7541 100
R7542 4.7K
K7509
1.74Vdc 4.45Vdc at ped.
MY2
SR_Y1
R7600 0
R7545 1k
R7552 100
Q7510
C7521 CH 100p
R7546 4.7K
R7548 2.2K
Q7511
R7590 820
R7547 820
R7551 100
Q7512
R7549 100
R7550 4.7K
K7510
SR_Y2
A 6/9
SB_Y1
R7601 0
R7553 1k
R7562 100
Q7513
C7523 CH 100p
R7554 4.7K
R7558 2.2K
R7555 10K
Q7514
R7591 820
R7557 820
R7561 100
R7556 4.7K
C7522 10/16
Q7515
R7559 100
R7560 4.7K
K7511
SB_Y2
SY1
0.7Vop 3.65Vdc at ped.
R7602 680
C7552 CH 33p/50
L7505 22
Q7516
R7570 100
C7535 CH 33p
C7524 CH 100p
R7564 2.7K
R7566 1.5K
R7592 560
Q7517
R7569 100
R7565 560
Q7518
R7567 100
R7568 4.7K
K7512
1.7Vdc 4.45Vdc at ped.
SY2
YUV2(1:6)
C7529 47/16
C7528 0.1
SY2
SB_Y2
SR_Y2
MY2
MB_Y2
MR_Y2
TY1
TB_Y1
TR_Y1
A 8/9
R7641 2.2K
1SS352-TRB
C7553 100p
D7504
R7639 22k
R7640 10K
Q7526
R7646 2.7K
C7556 100p
R7645 22k
Q7527
R7647 22k
Q7528
R7648 2.7K
5V
K7504
R7502 6.8K
C7501 47/6.3
R7503 100
Q7501
C7514 0.1
R7501 3.9K
R7504 680
0.8Vop 0.84Vdc at ped.
K7505
C7518 47/6.3
R7525 390
R7507 6.8K
Q7502
0.8Vp-p 0.5Vdc at ped.
R7506 3.9K
R7508 680
K7506
C7519 47/6.3
R7510 390
R7521 6.8K
Q7505
R7520 3.9K
R7522 680


A 6/9
S.SW
SDA3
MCCY
SCCY
SCL3
A 9/9
DY
DB_Y
DR_Y
RGB.R
RGB.G
RGB.B
A 3/9
G.RST
DATA
S_BUSY
S_DATA
S_CLK
S_ENB
CLK
G.ENB
V.MUTE
: Y SIGNAL ROUTE
R-Y : R-Y SIGNAL ROUTE
B-Y : B-Y SIGNAL ROUTE
E 1/2 CN5605
U11
T7
VIDEO(1:30)
5V
IC7505
TC74HC4066AF-TBB
IC7504
TC74HC4538AF-TBB
R7649 100
R7650 100
R7651 100
R7652 100
C7558 0.1
C7559 10/16
C7557 0.1
R7642 27k
C7554 120p
C7555 100p
R7643 15K
R7644 100
R7653 4.7K
R7655 4.7K
R7656 47k
R7654 47k
Q7529
Q7530
Q7525
R7634 100
R7635 4.7k
PASS
R-Y
B-Y
C7511 220/10
C7503 0.1
R7519 12K
R7518 10K
C7548 47/6.3
R7513 0
R_Y0 C7508 10/16
B_Y0 C7509 10/16
Y0 C7510 47/6.3
IC7503
NJM2283M-TFJ
IN1A GND1 IN2B V+ CTL2 IN2A GND3 IN3B
IN1B CTL1 OUT1 GND2 OUT2 CTL3 IN3A
4.5V
3.8V
K7502
GND
C7507 0.1
TWIN_Y0V(1:3)
R7524 100
C7504 10/16
R7528 100
0.7Vop 4.0Vdc
IC7502
TK15420M-TBB
D7502
RD10MB-TLB
C7502 0.1
R7512 390
C7512 68p
L7506 5.6
C7550 18p/50
R7533 100
C7515 100/6.3
R7534 1.0K
R7533 1.2K
R7596 100
R7595 100
R7531 100
R7535 100
R7532 100
K7513 TR-Y
K7514 TB-Y
K7503 TY
R-Y 18
B-Y 17
16
PASS
R7514 0
C7505 10/16
R7529 100
0.65Vp-p 4.5Vdc
D7503
RD10MB-TLB
R7523 0
R7511 0
R7505 0
IC7501
ML6420CS-3
VINB VINA RANGE GNDA GND VCCA VOUTA VOUTB
GNDB VINC GND GNDC VCC VCCC VOUTC VCCB
R7509 0
C7545 0.1
C7546 47/6.3
C7547 0.1
R7515 0
C7506 10/16
R7530 100
D7501
RD10MB-TLB
IN 0-2.0V
OUT 0.5-2.5V
R7620 R7621 R7622 R7623 R7624 R7625 R7626 R7627 R7628 R7629 R7630 R7631 R7632
R7605 R7606 R7607 R7608 R7609 R7610 R7611 R7612 R7613 R7614 R7615 R7616 R7617 R7618 R7619
19 20 21 22 23 24
AKM1155-
CN7501
GND
A 6/9
A 9/9
A 8/9
A 5/9

GND	23	1	MCCY
DR_Y	24	2	SCCY
DB_Y	25	3	GND
DY	26	4	GND
GND	27	5	H.BLK
GND	28	6	NC
GND	29	7	RGB.R
GND	30	8	RGB.G
GND	31	9	RGB.B
TR_Y	32	10	GND
TB_Y	33	11	GND
TY	34	12	GND
SCP0	35	13	GND
MHP	36	14	MVP
SDA3	37	15	SCL3
S.SW	38	16	RS
PASS	39	17	S_CLK
S_DATA	40	18	S_ENB
S_BUSY	41	19	CLK
DATA	42	20	G.ENB
G.RST	43	21	V.MUTE
GND	44	22	GND

- * Resistor indicated in ohm,1/16W,+-5% tolerance unless otherwise noted.k:k ohm,M:M ohm
- * Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 16V except Electrolytic capacitor.

2SC2712(YGR)-TLB

2SA1162(YGR)-TLB

LCTA###J3225-T

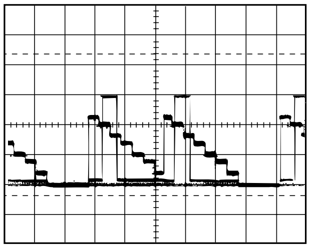
AKC1002-

AKX9002-A-T

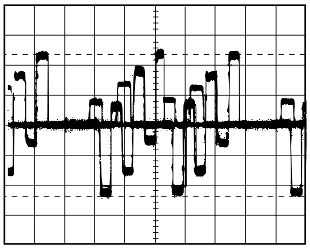
A 7/9 SIGNAL ASSY (7/9)

Input signal
Video signal : EIA full color-bar
Picture quality : Standard
Range :DC range (Unless otherwise noted)

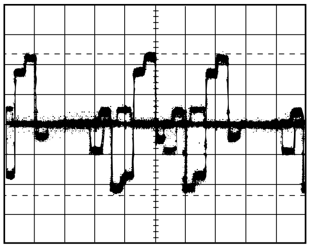
⑯ **K7503 (TY) (AC)**
V: 0.5V/div. H: 10µsec/div.



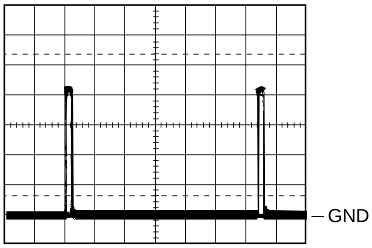
⑰ **K7514 (TB-Y) (AC)**
V: 0.1V/div. H: 10µsec/div.



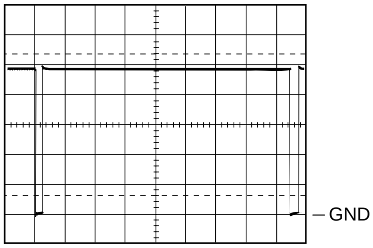
⑱ **K7513 (TR-Y) (AC)**
V: 0.1V/div. H: 10µsec/div.



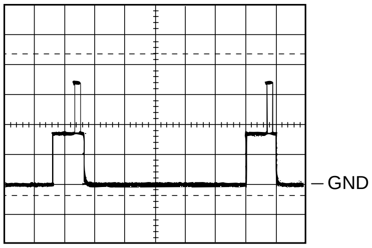
⑲ **CN7501-pin 36 (MHP)**
V: 1V/div. H: 10µsec/div.



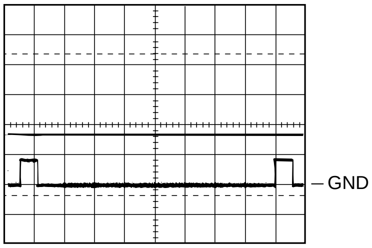
⑳ **CN7501-pin 14 (MVP)**
V: 1V/div. H: 2msec/div.



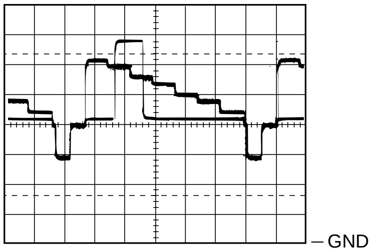
㉑-1 **CN7501-pin 35 (SCP0)**
V: 2V/div. H: 10µsec/div.



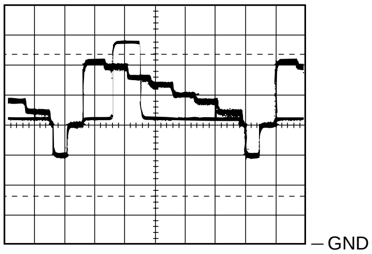
㉑-2 **CN7501-pin 35 (SCP0)**
V: 2V/div. H: 2msec/div.



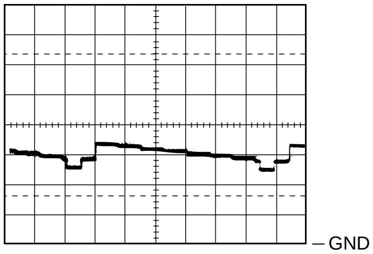
㉒ **CN7501-pin 1 (MCCY)**
V: 0.5V/div. H: 10µsec/div.



㉓ **CN7501-pin 2 (SCCY)**
V: 0.5V/div. H: 10µsec/div.



㉔ **CN7501-pin 26 (DYOUT)**
V: 1V/div. H: 10µsec/div.



A 7/9 SIGNAL ASSY (7/9)

IC7501 (ML6420CS-3)

Pin No.	Voltage (V)
1	0
2	1.16V at ped.
3	0
4	0
5	5
6	5
7	1.8V at ped.
8	5
9	1.7V at ped.
10	1.7V at ped.
11	5
12	0
13	0
14	5
15	1.04V at ped.
16	1.14V at ped

IC7502 (TK15420M)

Pin No.	Voltage (V)
1	3.8V at ped.
2	3.8V at ped.
3	3.8V at ped.
4	0
5	3.5V at ped.
6	3.5V at ped.
7	3.5V at ped.
8	9

IC7503 (NJM2283M

Pin No.	Voltage (V)
1	4.4
2	2.8 (sprit-screens) 0.1 (single-screen)
3	3.7
4	0
5	3.7
6	3.5
7	2.8 (sprit-screens) 0.1 (single-screen)
8	4.2
9	4.2
10	0
11	4.4
12	2.8 (sprit-screens) 0.1 (single-screen)
13	8.8
14	4.4
15	0
16	4.4

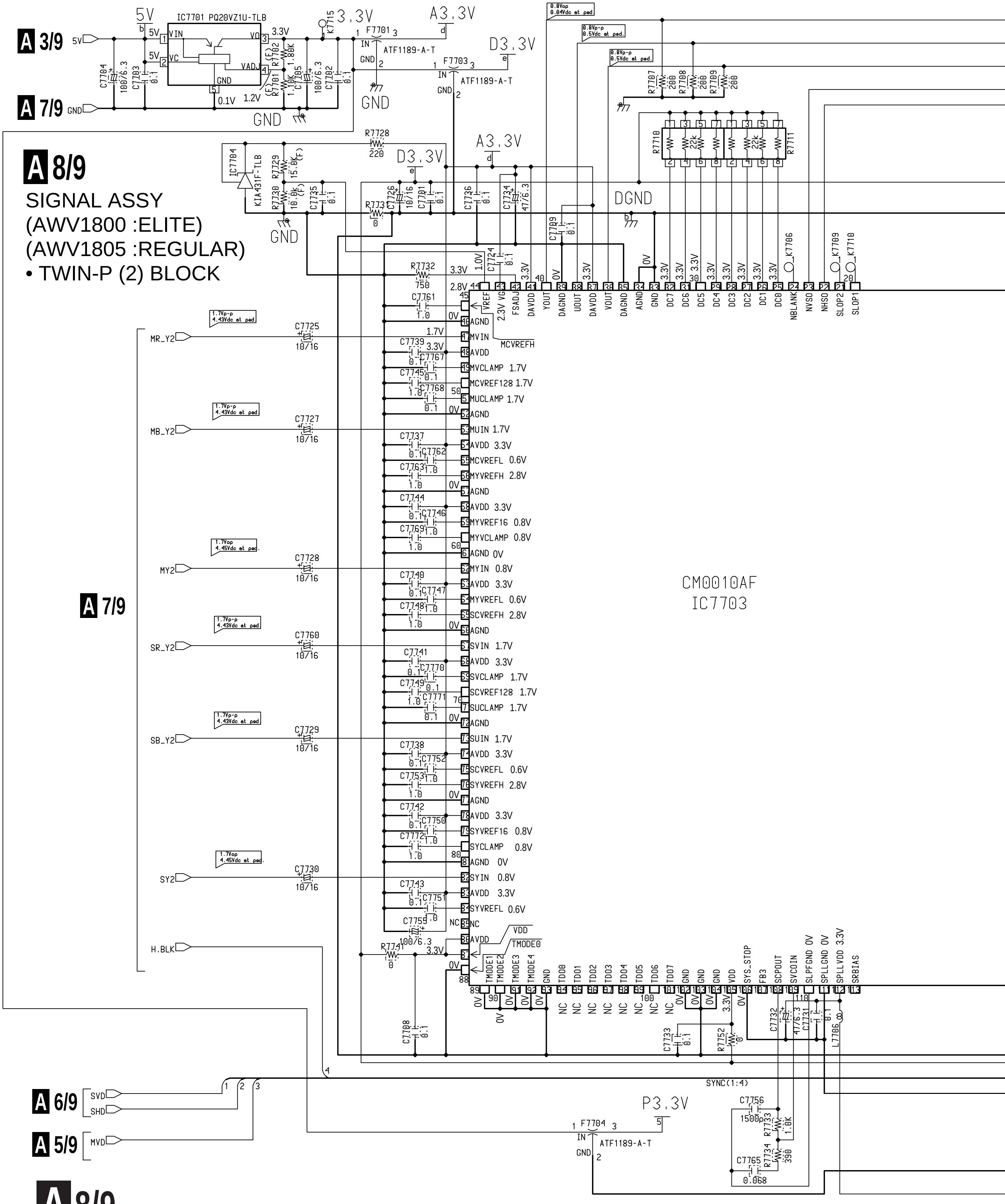
IC7504 (TC74HC4538AF)

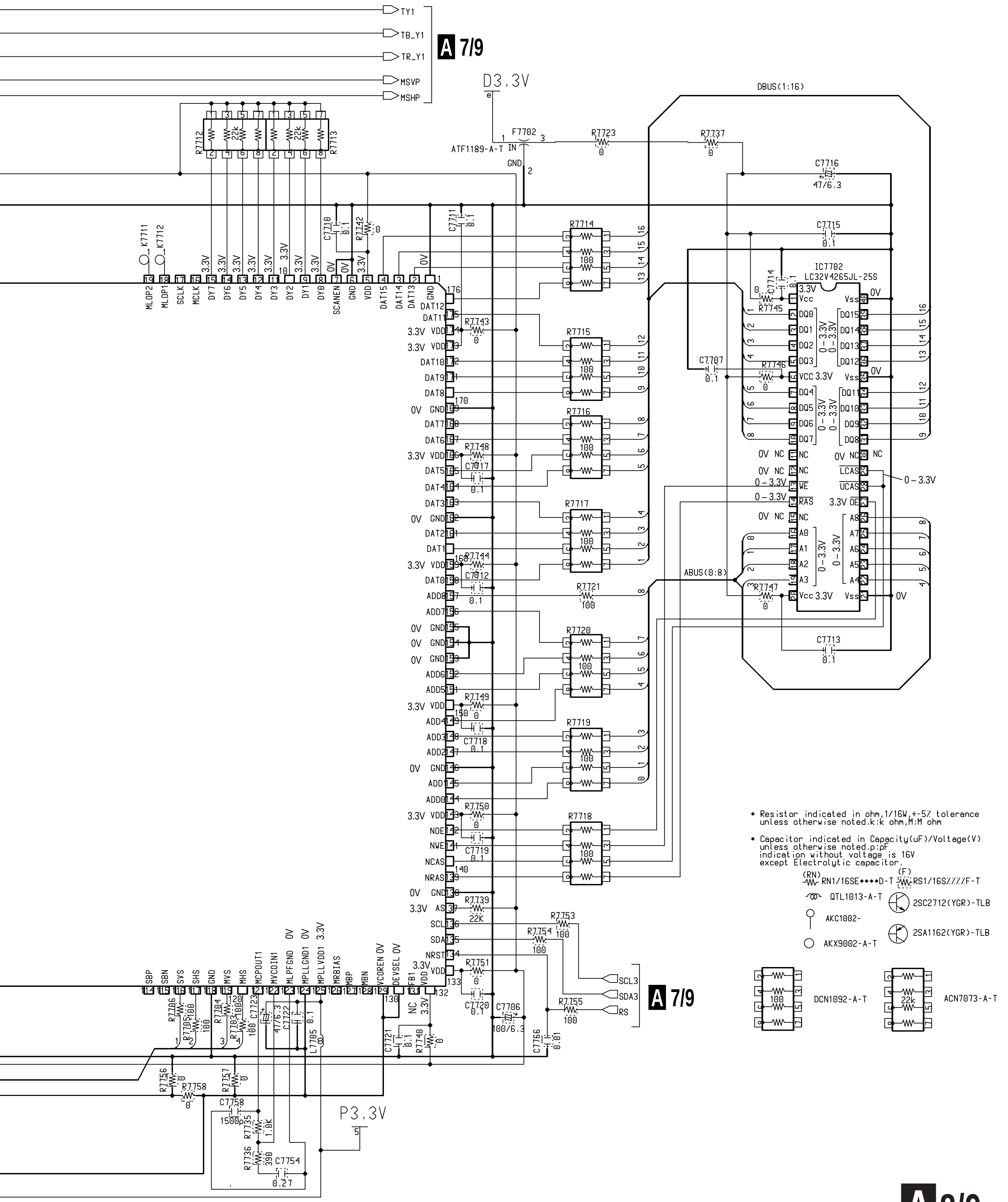
Pin No.	Voltage (V)
1	0
2	5
3	5
4	0 – 5
5	5
6	0 – 5
7	0 – 5
8	0
9	0 – 5
10	0 – 5
11	0 – 5
12	0
13	5
14	5
15	0
16	5

IC7505 (TC74HC4066AF)

Pin No.	Voltage (V)
1	0 – 5
2	0 – 5
3	0 – 5
4	0 – 5
5	0 (sprit-screens) 4.6 (single-screen)
6	0 (sprit-screens) 4.6 (single-screen)
7	0
8	0 – 5
9	0 – 5
10	0 – 5
11	0 – 5
12	5 (sprit-screens) 0 (single-screen)
13	5 (sprit-screens) 0 (single-screen)
14	5

3.10 SIGNAL ASSY (8/9)

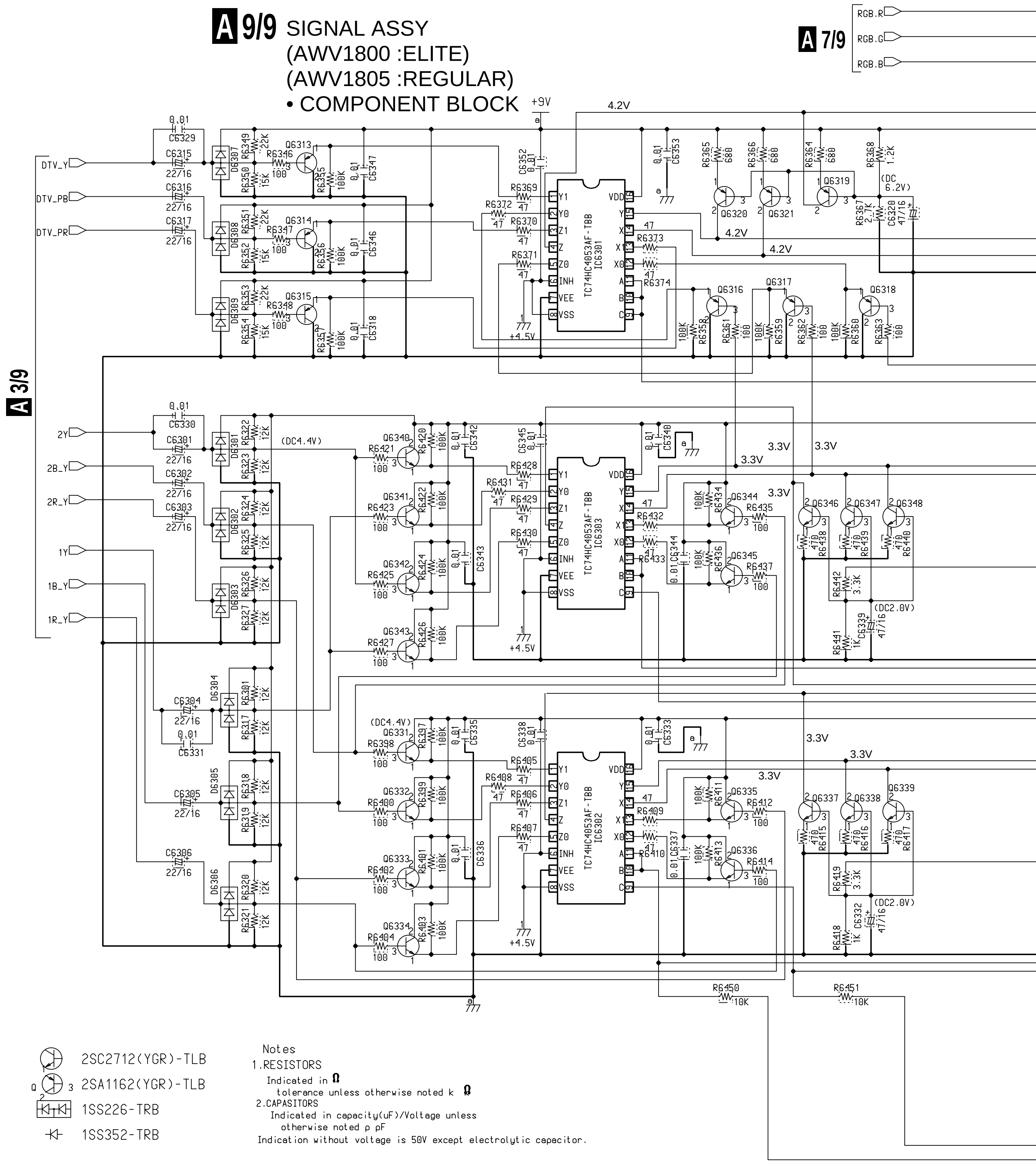

A 8/9
SIGNAL ASSY
(AWV1800 :ELITE)
(AWV1805 :REGULAR)
• TWIN-P (2) BLOCK
A 3/9
5V
A 7/9
GND
IC7701 PQ20VZ1U-TLB
VIN
VO
VC
VADJ
GND
C7704 100/6.3
C7703 0.1
R7701 1.10K (F)
R7702 1.80K (F)
C7705 100/6.3
C7702 0.1
K7715
3.3V
F7701 ATF1189-A-T
IN
GND
A3.3V
D3.3V
F7703 ATF1189-A-T
0.1V
1.2V
R7728 220
IC7704 KIA431F-TLB
R7729 15.0K (F)
R7730 10.0K (F)
C7735 0.1
R7731 0
C7726 10/16
C7701 0.1
C7736 0.1
C7734 47/6.3
C7709 0.1
DGND
0.8Vop 0.04Vdc at ped
0.8Vp-p 0.5Vdc at ped.
R7707 200
R7708 200
R7709 200
R7710 22k
R7711 22k
R7732 750
C7761 1.0
C7724 0.1
K7706
K7709
K7710
VREF
VC
FSADJ
DAVDD
YOUT
DAGND
UOUT
VOUT
AGND
GND
DC7
DC6
DC5
DC4
DC3
DC2
DC1
DC0
NBLANK
NVSO
NHSO
SLOP2
SLOP1
MCVREFH
1.7Vp-p 4.43Vdc at ped
MR_Y2
C7725 10/16
MB_Y2
C7727 10/16
1.7Vop 4.45Vdc at ped.
MY2
C7728 10/16
A 7/9
SR_Y2
C7760 10/16
SB_Y2
C7729 10/16
SY2
C7730 10/16
H.BLK
C7739 0.1
C7767 0.1
C7745 1.0
C7768 0.1
C7737 0.1
C7762 1.0
C7763 1.0
C7744 0.1
C7746 1.0
C7769 1.0
C7740 0.1
C7747 1.0
C7748 1.0
C7741 0.1
C7770 0.1
C7749 1.0
C7771 0.1
C7738 0.1
C7752 1.0
C7753 1.0
C7742 0.1
C7750 1.0
C7772 1.0
C7743 0.1
C7751 1.0
C7755 100/6.3
R7741 0
C7708 0.1
AGND
MVIN
AVDD
MVCLAMP 1.7V
MCVREF128 1.7V
MUCLAMP 1.7V
MUIN 1.7V
AVDD 3.3V
MCVREFL 0.6V
MYVREFH 2.8V
MYVREF16 0.8V
MYVCLAMP 0.8V
AGND 0V
MYIN 0.8V
MYVREFL 0.6V
SCVREFH 2.8V
SVIN 1.7V
SVCLAMP 1.7V
SCVREF128 1.7V
SUCLAMP 1.7V
SUIN 1.7V
SCVREFL 0.6V
SYVREFH 2.8V
SYVREF16 0.8V
SYCLAMP 0.8V
SYIN 0.8V
SYVREFL 0.6V
NC
VDD
TMODE0
TMODE1
TMODE2
TMODE3
TMODE4
TDO0
TDO1
TDO2
TDO3
TDO4
TDO5
TDO6
TDO7
SYS_STOP
FB3
SCPOUT
SVCOIN
SLPFGND 0V
SPLLGND 0V
SPLLVDD 3.3V
SRBIAS
CM0010AF
IC7703
C7733 0.1
R7752 0
C7732 47/6.3
C7731 0.1
L7706
SYNC(1:4)
A 6/9
SVD
SHD
A 5/9
MVD
P3.3V
F7704 ATF1189-A-T
C7756 1500p
R7733 1.0K
R7734 390
C7765 0.068


A
B
C
D
TY1
TB_Y1
TR_Y1
MSVP
MSHP
A 7/9
D3.3V
DBUS(1:16)
F7702
ATF1189-A-T
IN
GND
R7723
0
R7737
0
C7716
47/6.3
C7715
0.1
R7712
R7713
22k
C7710
0.1
R7742
0
C7711
0.1
K7711
K7712
MLOP2
MLOP1
SCLK
MCLK
DY7
DY6
DY5
DY4
DY3
DY2
DY1
DY0
SCANEN
GND
VDD
DAT15
DAT14
DAT13
3.3V
0V
176
DAT12
DAT11
R7743
DAT10
DAT9
DAT8
170
DAT7
DAT6
R7748
C7717
DAT5
DAT4
DAT3
DAT2
DAT1
160
R7744
C7712
DAT0
ADD8
ADD7
ADD6
ADD5
R7749
150
ADD4
C7718
ADD3
ADD2
ADD1
ADD0
R7750
NOE
NWE
C7719
NCAS
NRAS
140
AS
R7739
22K
SCL
SDA
NRST
R7751
133
132
130
C7720
C7706
100/6.3
C7766
0.01
R7753
100
R7754
100
R7755
100
SCL3
SDA3
RS
A 7/9
R7714
R7715
R7716
R7717
R7720
R7719
R7718
R7721
100
IC7702
LC32V4265JL-25S
C7714
R7745
Vcc
Vss
DQ0
DQ1
DQ2
DQ3
DQ4
DQ5
DQ6
DQ7
DQ8
DQ9
DQ10
DQ11
DQ12
DQ13
DQ14
DQ15
C7707
R7746
VCC
NC
WE
RAS
LCAS
UCAS
OE
A0
A1
A2
A3
A4
A5
A6
A7
A8
0 – 3.3V
ABUS(0:8)
R7747
C7713
SBP
SBN
SVS
SHS
MHS
MCPOUT1
MVCOIN1
MLPFGND
MPLLGND1
MPLLVDD1
MRBIAS
MBP
MBN
VCOREN
DEVSEL
FB1
R7706
R7705
R7704
R7703
120
C7723
47/6.3
C7722
L7705
C7721
R7740
NC
R7756
R7758
R7757
C7758
1500p
R7735
1.0k
R7736
390
C7754
0.27
P3.3V
(RN)
RN1/16SE∗∗∗∗D-T
(F)
RS1/16S∕∕∕∕F-T
QTL1013-A-T
AKC1002-
AKX9002-A-T
2SC2712(YGR)-TLB
2SA1162(YGR)-TLB
DCN1092-A-T
ACN7073-A-T
22k

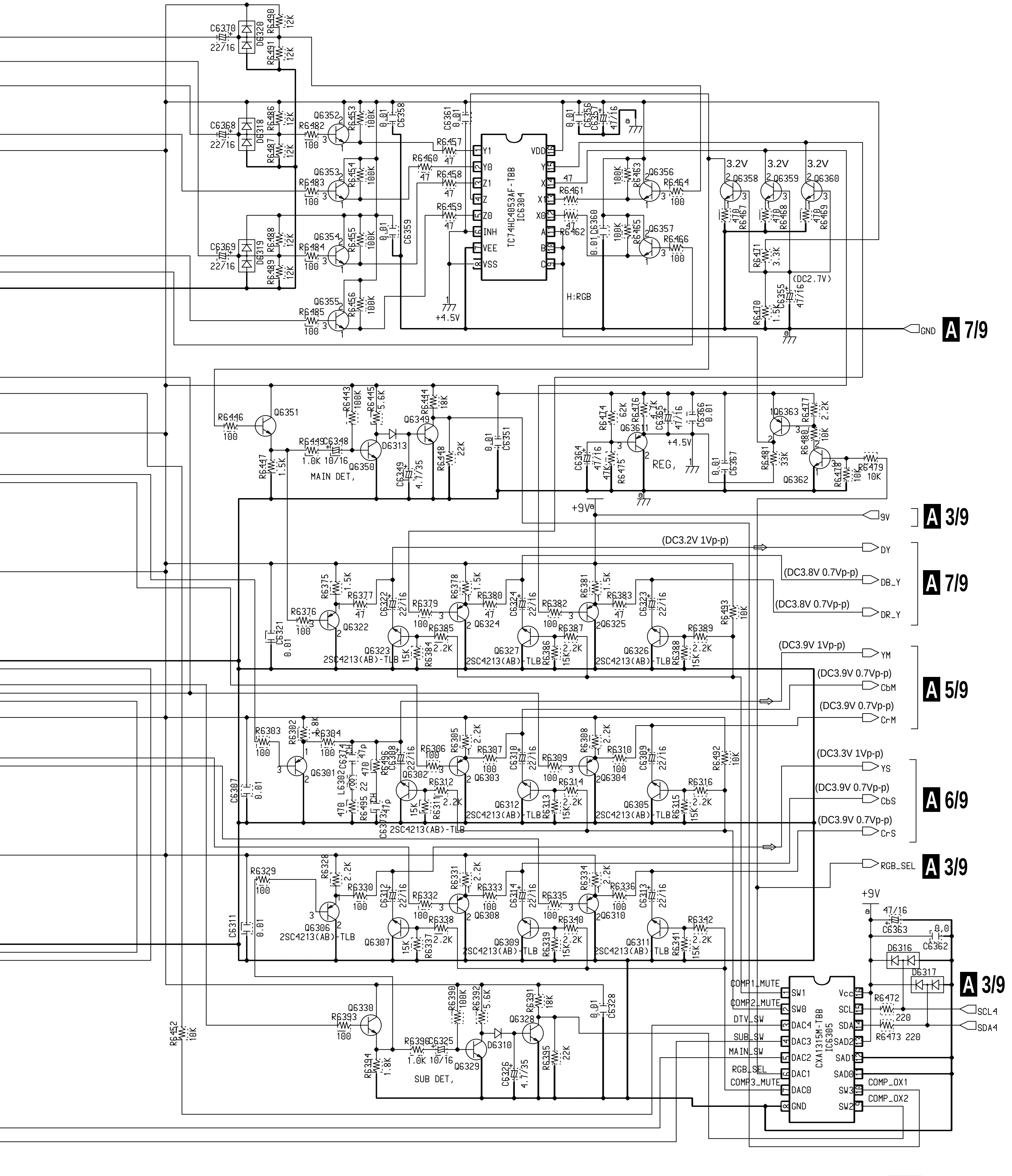
∗ Resistor indicated in ohm,1/16W,+-5% tolerance unless otherwise noted.k:k ohm,M:M ohm

∗ Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 16V except Electrolytic capacitor.

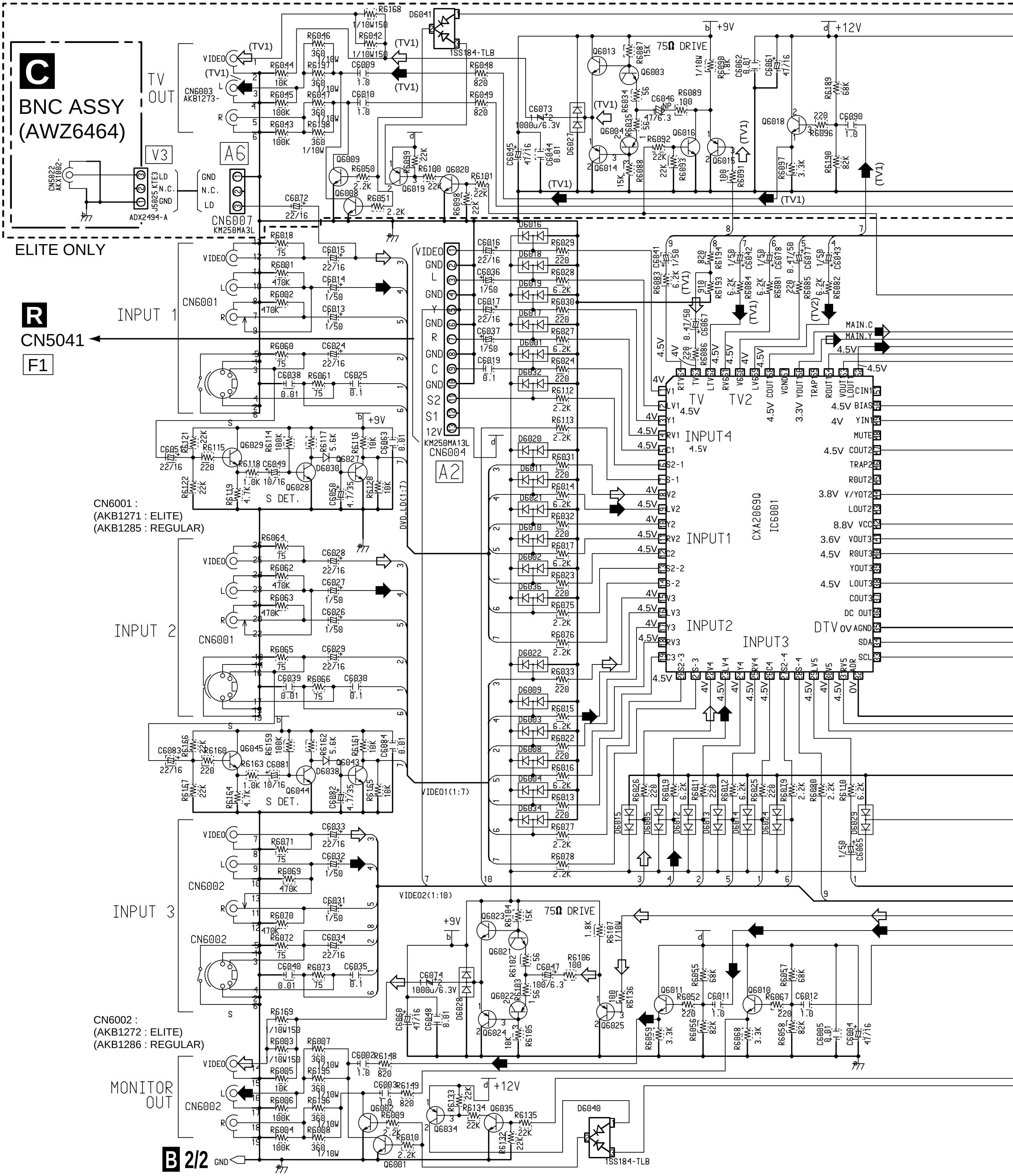
3.11 SIGNAL ASSY (9/9)


A 9/9 SIGNAL ASSY
(AWV1800 :ELITE)
(AWV1805 :REGULAR)
• COMPONENT BLOCK
A 7/9
RGB.R
RGB.G
RGB.B
A 3/9
DTV_Y
DTV_PB
DTV_PR
2Y
2B_Y
2R_Y
1Y
1B_Y
1R_Y
+9V
4.2V
+4.5V
3.3V
(DC4.4V)
(DC 6.2V)
(DC2.0V)
TC74HC4053AF-TBB IC6301
TC74HC4053AF-TBB IC6303
TC74HC4053AF-TBB IC6302
VDD
Y1
Y0
Z1
Z
Z0
INH
VEE
VSS
Y
X
X1
X0
A
B
C
Q6313
Q6314
Q6315
Q6316
Q6317
Q6318
Q6319
Q6320
Q6321
Q6340
Q6341
Q6342
Q6343
Q6344
Q6345
Q6346
Q6347
Q6348
Q6331
Q6332
Q6333
Q6334
Q6335
Q6336
Q6337
Q6338
Q6339
D6307
D6308
D6309
D6301
D6302
D6303
D6304
D6305
D6306
C6329 0.01
C6315 22/16
C6316 22/16
C6317 22/16
C6330 0.01
C6301 22/16
C6302 22/16
C6303 22/16
C6304 22/16
C6331 0.01
C6305 22/16
C6306 22/16
C6347 0.01
C6346 0.01
C6318 0.01
C6352 0.01
C6353 0.01
C6320 47/16
C6342 0.01
C6343 0.01
C6345 0.01
C6340 0.01
C6344 0.01
C6339 47/16
C6335 0.01
C6336 0.01
C6338 0.01
C6333 0.01
C6337 0.01
C6332 47/16
R6349 22K
R6350 15K
R6346 100
R6355 100K
R6351 22K
R6352 15K
R6347 100
R6356 100K
R6353 22K
R6354 15K
R6348 100
R6357 100K
R6369 47
R6372 47
R6370 47
R6371 47
R6373 47
R6374 47
R6365 680
R6366 680
R6364 680
R6368 1.2K
R6367 2.7K
R6358 100K
R6361 100
R6359 100K
R6362 100
R6360 100K
R6363 100
R6322 12K
R6323 12K
R6324 12K
R6325 12K
R6326 12K
R6327 12K
R6420 100K
R6421 100
R6422 100K
R6423 100
R6424 100K
R6425 100
R6426 100K
R6427 100
R6428 47
R6431 47
R6429 47
R6430 47
R6432 47
R6433 47
R6434 100K
R6435 100
R6436 100K
R6437 100
R6438 470
R6439 470
R6440 470
R6442 3.3K
R6441 1K
R6301 12K
R6317 12K
R6318 12K
R6319 12K
R6320 12K
R6321 12K
R6397 100K
R6398 100
R6399 100K
R6400 100
R6401 100K
R6402 100
R6403 100K
R6404 100
R6405 47
R6408 47
R6406 47
R6407 47
R6409 47
R6410 47
R6411 100K
R6412 100
R6413 100K
R6414 100
R6415 470
R6416 470
R6417 470
R6419 3.3K
R6418 1K
R6450 10K
R6451 10K
2SC2712(YGR)-TLB
2SA1162(YGR)-TLB
1SS226-TRB
1SS352-TRB
1
2
3
4
A
B
C
D

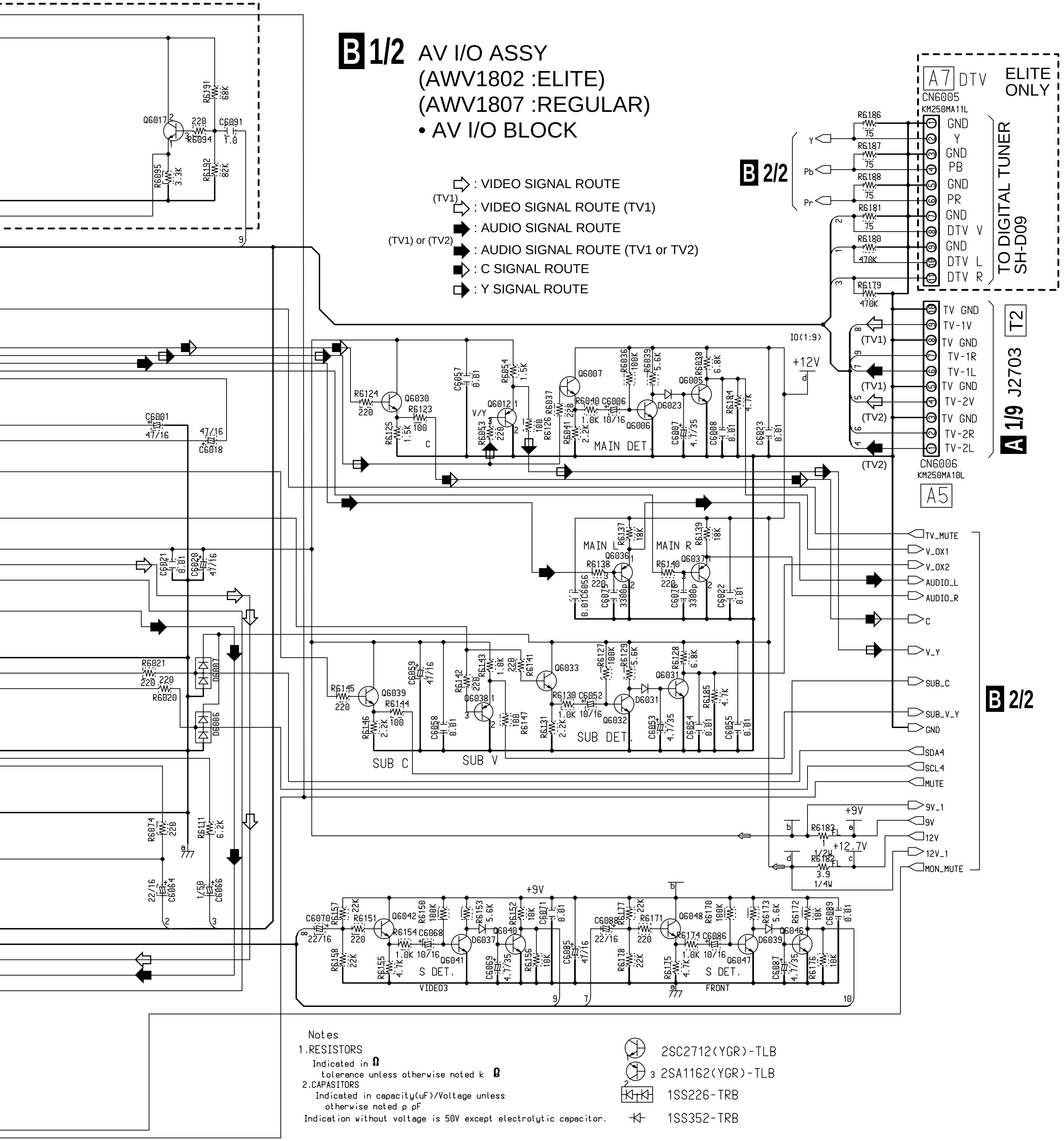
Notes
1.RESISTORS
Indicated in Ω
tolerance unless otherwise noted k Ω
2.CAPASITORS
Indicated in capacity(uF)/Voltage unless
otherwise noted p pF
Indication without voltage is 50V except electrolytic capacitor.


C6370 22/16
D6320
R6490 12K
R6491 12K
C6368 22/16
D6318
R6486 12K
R6487 12K
C6369 22/16
D6319
R6488 12K
R6489 12K
Q6352
R6482 100
R6453 100K
Q6353
R6483 100
R6454 100K
Q6354
R6484 100
R6455 100K
Q6355
R6485 100
R6456 100K
C6358 0.01
C6359 0.01
C6361 0.01
R6457 47
R6460 47
R6458 47
R6459 47
TC74HC4053AF-TBB
IC6304
Y1 Y0 Z1 Z Z0 INH VEE VSS
VDD Y X X1 X0 A B C
+4.5V
H:RGB
C6356 0.01
C6357 47/16
R6461 47
R6462 47
C6360 0.01
R6463 100K
Q6356
R6464 100
R6465 100K
Q6357
R6466 100
3.2V
Q6358
Q6359
Q6360
R6467 470
R6468 470
R6469 470
R6471 3.3K
(DC2.7V)
C6355 47/16
R6470 1.5K
GND
A 7/9
R6446 100
Q6351
R6447 1.5K
R6449 1.0K
C6348 10/16
Q6350
MAIN DET,
R6443 100K
R6445 5.6K
D6313
Q6349
R6444 18K
C6349 4.7/35
R6448 22K
C6351 0.01
R6414 62K
R6416 4.7K
C6365 47/16
C6366 0.01
Q6361
+4.5V
C6364 47/16
R6415 47K
R6475
REG,
C6367 0.01
Q6363
R6417 2.2K
R6480 10K
R6481 33K
Q6362
R6478 10K
R6479 10K
+9V
9V
A 3/9
(DC3.2V 1Vp-p)
DY
(DC3.8V 0.7Vp-p)
DB_Y
(DC3.8V 0.7Vp-p)
DR_Y
A 7/9
R6375 1.5K
R6377 47
R6376 100
Q6322
C6321 0.01
C6322 22/16
R6379 100
Q6323
R6385 2.2K
R6384 15K
2SC4213(AB)-TLB
R6378 1.5K
R6380 47
Q6324
C6324 22/16
R6382 100
Q6327
R6387 2.2K
R6386 15K
R6381 1.5K
R6383 47
Q6325
C6323 22/16
Q6326
R6389 2.2K
R6388 15K
R6493 10K
(DC3.9V 1Vp-p)
YM
(DC3.9V 0.7Vp-p)
CbM
(DC3.9V 0.7Vp-p)
CrM
A 5/9
R6303 100
R6302 1.8K
R6304 100
Q6301
C6307 0.01
C6374 47p
L6302 22
R6496 470
R6495 470
C6373 47p
C6308 22/16
R6306 100
Q6302
R6312 2.2K
R6311 15K
R6305 2.2K
R6307 100
Q6303
C6310 22/16
R6309 100
Q6312
R6314 2.2K
R6313 15K
R6308 2.2K
R6310 100
Q6304
C6309 22/16
Q6305
R6316 2.2K
R6315 15K
R6492 10K
(DC3.3V 1Vp-p)
YS
(DC3.9V 0.7Vp-p)
CbS
(DC3.9V 0.7Vp-p)
CrS
A 6/9
RGB_SEL
A 3/9
R6329 100
R6328 2.2K
R6330 100
Q6306
C6311 0.01
C6312 22/16
R6332 100
Q6307
R6338 2.2K
R6337 15K
R6331 2.2K
R6333 100
Q6308
C6314 22/16
R6335 100
Q6309
R6340 2.2K
R6339 15K
R6334 2.2K
R6336 100
Q6310
C6313 22/16
Q6311
R6342 2.2K
R6341 15K
+9V
47/16
C6363
C6362 0.01
D6316
D6317
A 3/9
R6472 220
R6473 220
SCL4
SDA4
R6452 10K
Q6330
R6393 100
R6394 1.8K
R6396 1.0K
C6325 10/16
Q6329
SUB DET,
R6390 100K
R6392 5.6K
D6310
Q6328
R6391 18K
C6326 4.7/35
R6395 22K
C6328 0.01
COMP1_MUTE
COMP2_MUTE
DTV_SW
SUB_SW
MAIN_SW
RGB_SEL
COMP3_MUTE
SW1 SW0 DAC4 DAC3 DAC2 DAC1 DAC0 GND
Vcc SCL SDA SAD2 SAD1 SAD0 SW3 SW2
CXA1315M-TBB
IC6305
COMP_OX1
COMP_OX2

3.12 AV I/O (1/2) and BNC ASSYS


C
BNC ASSY
(AWZ6464)
V3
A6
TV OUT
CN6003 AKB1273-
CN5022 AKX1002-
J5025 KTE3
ADX2494-A
CN6007 KM250MA3L
ELITE ONLY
R
CN5041
F1
INPUT 1
CN6001
INPUT 2
INPUT 3
CN6002
MONITOR OUT
CN6001 :
(AKB1271 : ELITE)
(AKB1285 : REGULAR)
CN6002 :
(AKB1272 : ELITE)
(AKB1286 : REGULAR)
CN6004 KM250MA13L
A2
S DET.
DVD_LD(1:7)
VIDEO1(1:7)
VIDEO2(1:10)
75Ω DRIVE
+9V
+12V
(TV1)
(TV2)
D6041 1SS184-TLB
D6040 1SS184-TLB
CXA2069Q IC6001
INPUT4
INPUT1
INPUT2
INPUT3
TV
TV2
DTV
MAIN.C
MAIN.Y
B 2/2
GND

B 1/2 C


A7 DTV
ELITE ONLY
CN6005
KM250MA11L
GND
Y
GND
PB
GND
PR
GND
DTV V
GND
DTV L
DTV R
TO DIGITAL TUNER SH-D09
B 2/2
Y
Pb
Pr
R6186 75
R6187 75
R6188 75
R6181 75
R6180 470K
R6179 470K
TV GND
TV-1V
TV GND
TV-1R
TV-1L
TV GND
TV-2V
TV GND
TV-2R
TV-2L
T2
J2703
A 1/9
CN6006
KM250MA10L
A5
(TV1)
(TV2)
IO(1:9)
+12V
MAIN DET.
MAIN L
MAIN R
SUB DET.
SUB C
SUB V
V/Y
TV_MUTE
V_OX1
V_OX2
AUDIO_L
AUDIO_R
C
V_Y
SUB_C
SUB_V_Y
GND
SDA4
SCL4
MUTE
9V_1
9V
12V
12V_1
MON_MUTE
B 2/2
+9V
+12.7V
R6183 1 1/2W
R6182 3.9 1/4W
+9V
S DET.
VIDEO3
S DET.
FRONT
Q6017
Q6030
Q6012
Q6007
Q6006
Q6005
Q6036
Q6037
Q6039
Q6038
Q6033
Q6032
Q6031
Q6042
Q6041
Q6040
Q6048
Q6047
Q6046
D6023
D6031
D6037
D6039
D6007
D6006
C6001 47/16
C6018 47/16
C6021 0.01
C6020 47/16
R6021 220
R6020 220
R6074 220
R6111 6.2K
C6064 22/16
C6066 1/50
R6191 68K
R6192 82K
R6094 220
C6091 1.0
R6095 3.3K

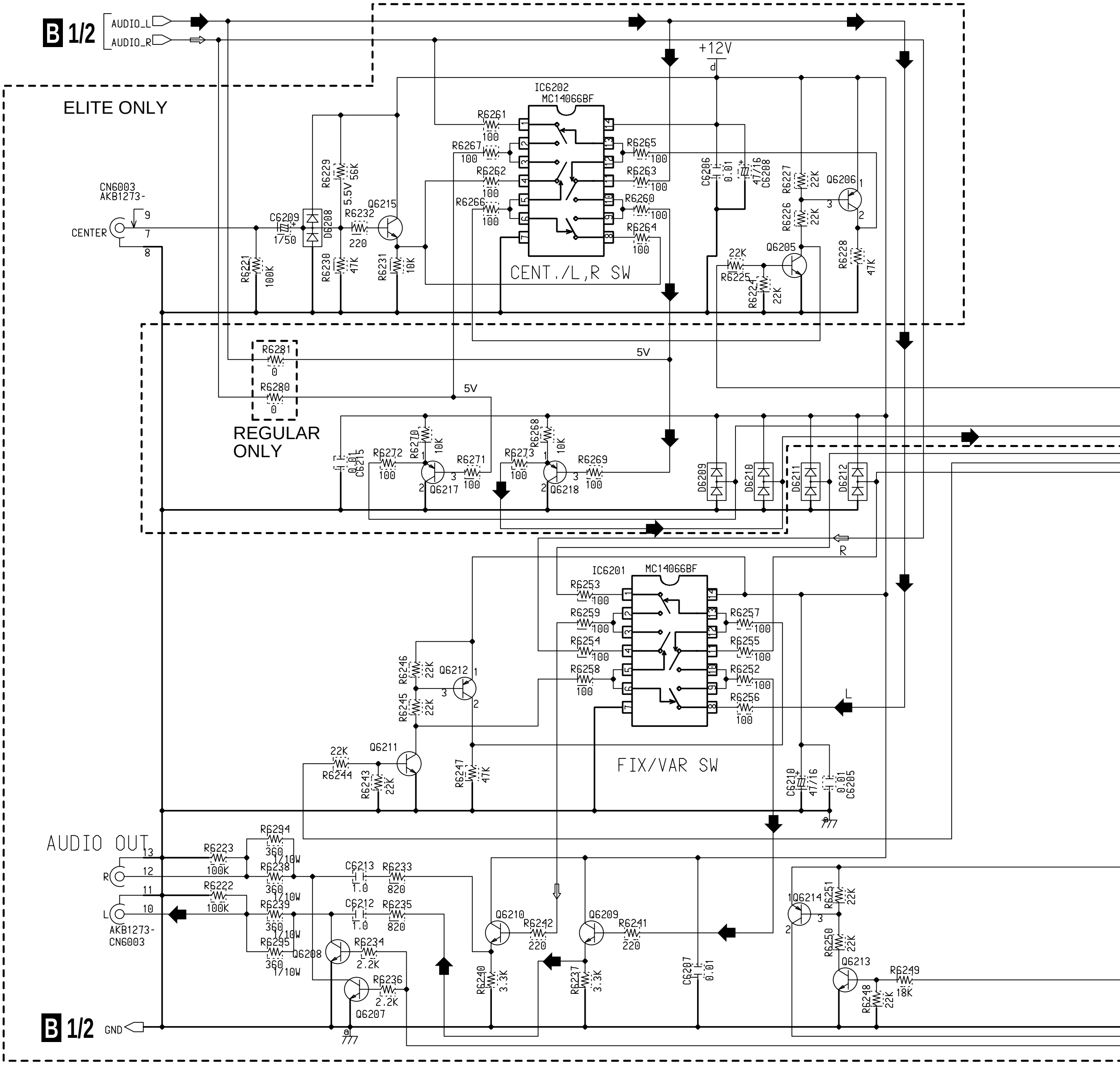
B 1/2 AV I/O ASSY
(AWV1802 :ELITE)
(AWV1807 :REGULAR)
• AV I/O BLOCK

⇨ : VIDEO SIGNAL ROUTE
(TV1) ⇨ : VIDEO SIGNAL ROUTE (TV1)
➡ : AUDIO SIGNAL ROUTE
(TV1) or (TV2) ➡ : AUDIO SIGNAL ROUTE (TV1 or TV2)
➡ : C SIGNAL ROUTE
⇨ : Y SIGNAL ROUTE

Notes
1.RESISTORS
Indicated in Ω
tolerance unless otherwise noted k Ω
2.CAPASITORS
Indicated in capacity(uF)/Voltage unless
otherwise noted p pF
Indication without voltage is 50V except electrolytic capacitor.

2SC2712(YGR)-TLB
2SA1162(YGR)-TLB
1SS226-TRB
1SS352-TRB

3.13 AV I/O (2/2) and SR ASSYS

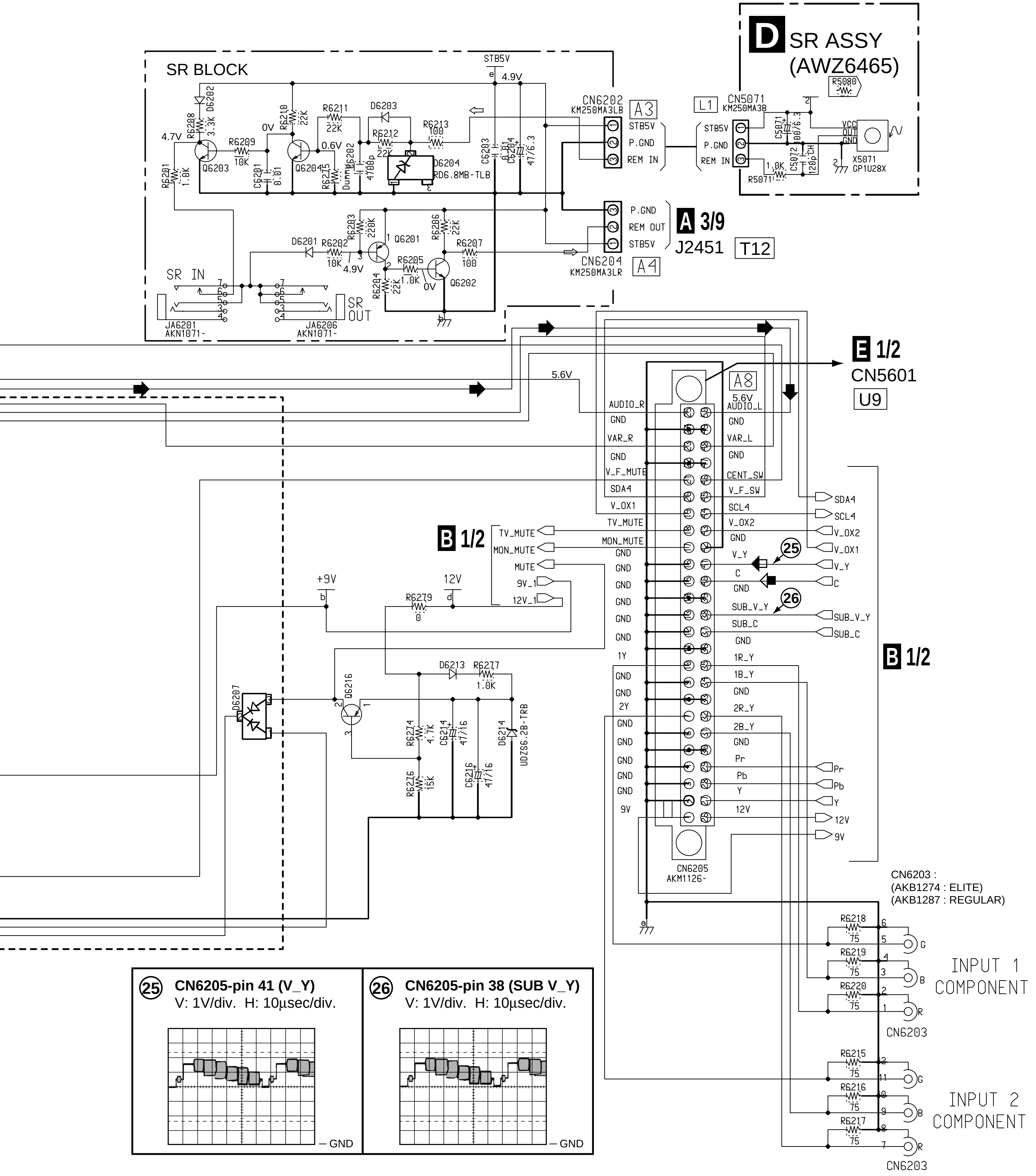

B 1/2
AUDIO_L
AUDIO_R
ELITE ONLY
+12V
IC6202
MC14066BF
R6261 100
R6267 100
R6262 100
R6266 100
R6265 100
R6263 100
R6260 100
R6264 100
CENT./L,R SW
C6206 0.01
C6208 47/16
R6227 22K
R6226 22K
Q6206
Q6205
R6225 22K
R6224 22K
R6228 47K
CN6003
AKB1273-
CENTER
C6209 1/50
D6208
R6229 56K
5.5V
R6232 220
Q6215
R6221 100K
R6230 47K
R6231 10K
R6281 0
R6280 0
5V
REGULAR ONLY
C6215 0.01
R6272 100
R6270 10K
R6271 100
Q6217
R6273 100
R6268 10K
R6269 100
Q6218
D6209
D6210
D6211
D6212
R
IC6201
MC14066BF
R6253 100
R6259 100
R6254 100
R6258 100
R6257 100
R6255 100
R6252 100
R6256 100
L
FIX/VAR SW
R6246 22K
R6245 22K
Q6212
Q6211
22K
R6244
R6243 22K
R6247 47K
C6210 47/16
C6205 0.01
AUDIO OUT
R6223 100K
R6222 100K
R6294 360 1/10W
R6238 360 1/10W
R6239 360 1/10W
R6295 360 1/10W
AKB1273-
CN6003
C6213 1.0
R6233 820
C6212 1.0
R6235 820
Q6208
R6234 2.2K
R6236 2.2K
Q6207
Q6210
R6242 220
R6240 3.3K
Q6209
R6241 220
R6237 3.3K
C6207 0.01
Q6214
R6251 22K
R6250 22K
Q6213
R6249 18K
R6248 22K
B 1/2
GND

B 2/2 AV I/O ASSY
(AWV1802 :ELITE)
(AWV1807 :REGULAR)
- AV I/O and SR BLOCKS

Notes
1.RESISTORS
Indicated in Ω
tolerance unless otherwise noted k Ω
2.CAPASITORS
Indicated in capacity(uF)/Voltage unless
otherwise noted p pF
Indication without voltage is 50V except electrolytic capacitor.

2SC2712(YGR)-TLB
2SA1162(YGR)-TLB
1SS352-TRB

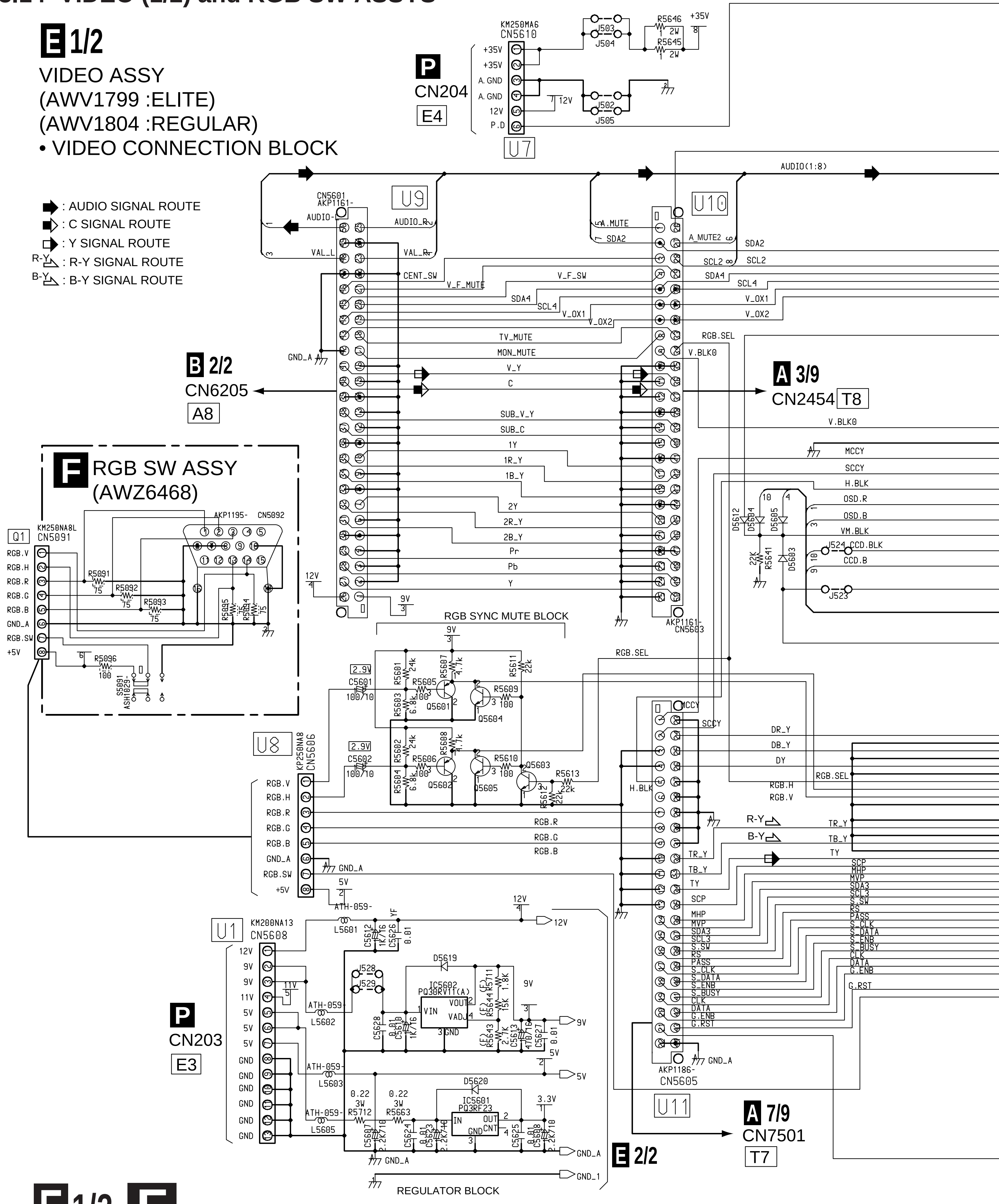
➡ : AUDIO SIGNAL ROUTE
➡ : C SIGNAL ROUTE
⇨ : Y SIGNAL ROUTE

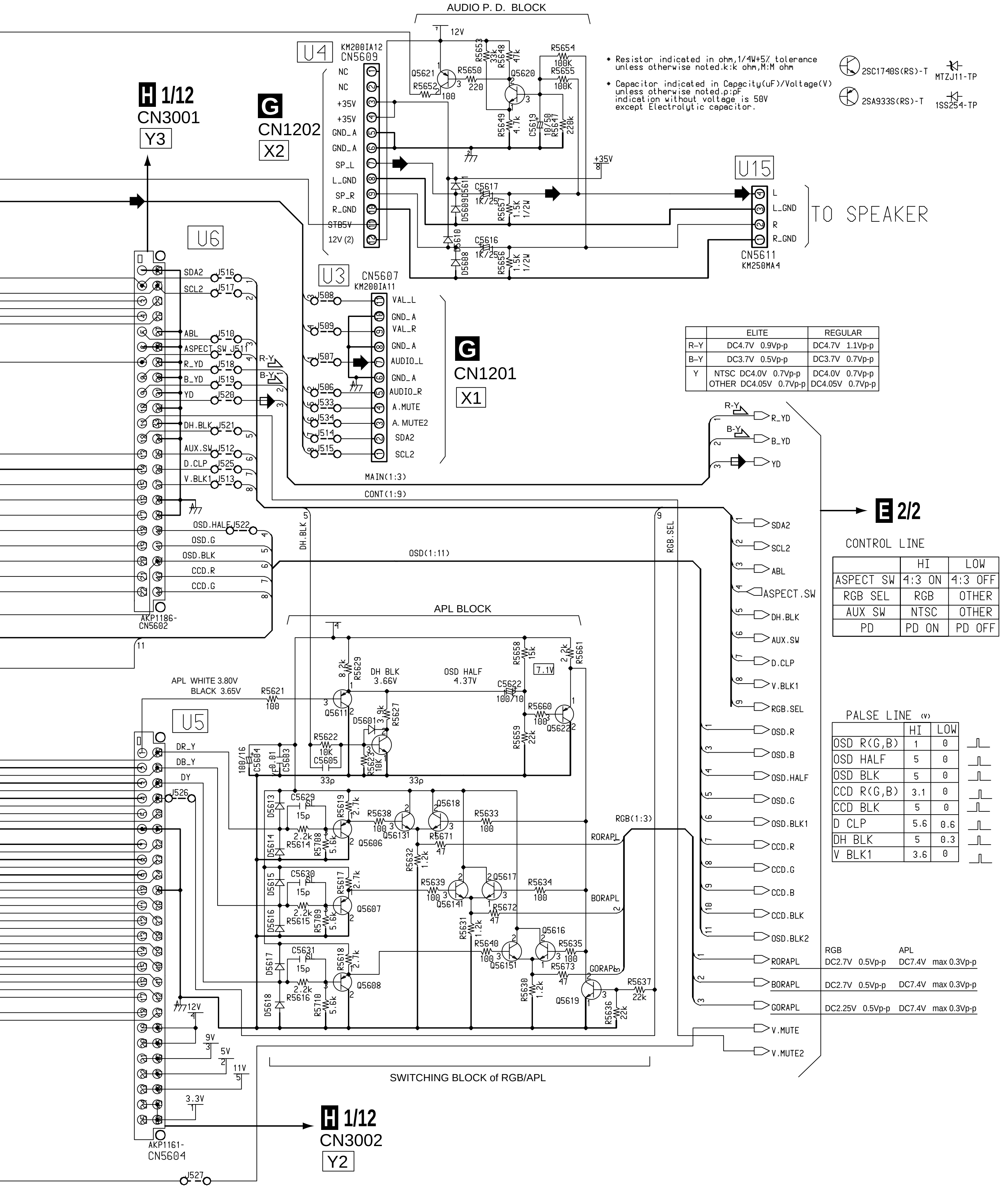

D SR ASSY (AWZ6465)
R5080
CN5071 KM250MA3B
L1
STB5V
P.GND
REM IN
C5071 100/6.3
C5072 120p CH
R5071 1.0K
VCC OUT GND
X5071 GP1U28X
SR BLOCK
STB5V
4.9V
CN6202 KM250MA3LB
A3
STB5V
P.GND
REM IN
D6202
R6208 3.3K
R6210 22K
R6211 22K
D6203
R6213 100
R6212 22K
4.7V
0V
0.6V
R6209 10K
Q6203
Q6204
C6201 0.01
R6215 Dummy
C6202 4700p
D6204 RD6.8MB-TLB
C6203 0.01
C6204 47/6.3
R6201 1.0K
P.GND
REM OUT
STB5V
CN6204 KM250MA3LR
A4
A 3/9
J2451
T12
D6201
R6202 10K
R6203 220K
Q6201
R6206 22K
R6207 100
R6205 1.0K
R6204 22K
4.9V
0V
Q6202
SR IN
SR OUT
JA6201 AKN1071-
JA6206 AKN1071-
E 1/2
CN5601
U9
5.6V
A8
5.6V
AUDIO_R
GND
VAR_R
GND
V_F_MUTE
SDA4
V_OX1
TV_MUTE
MON_MUTE
GND
GND
GND
GND
GND
GND
1Y
GND
GND
2Y
GND
GND
GND
GND
GND
9V
AUDIO_L
GND
VAR_L
GND
CENT_SW
V_F_SW
SCL4
V_OX2
GND
V_Y
C
GND
SUB_V_Y
SUB_C
GND
1R_Y
1B_Y
GND
2R_Y
2B_Y
GND
Pr
Pb
Y
12V
CN6205 AKM1126-
SDA4
SCL4
V_OX2
V_OX1
V_Y
C
SUB_V_Y
SUB_C
Pr
Pb
Y
12V
9V
25
26
B 1/2
B 1/2
TV_MUTE
MON_MUTE
MUTE
9V_1
12V_1
+9V
12V
R6279 0
D6213
R6277 1.0K
Q6216
D6207
R6274 4.7K
C6214 47/16
D6214 UDZS6.2B-TRB
R6276 15K
C6216 47/16
CN6203 : (AKB1274 : ELITE) (AKB1287 : REGULAR)
R6218 75
R6219 75
R6220 75
G
B
R
INPUT 1 COMPONENT
CN6203
R6215 75
R6216 75
R6217 75
INPUT 2 COMPONENT
CN6203
GND
GND

㉕ **CN6205-pin 41 (V_Y)**
V: 1V/div. H: 10µsec/div.

㉖ **CN6205-pin 38 (SUB V_Y)**
V: 1V/div. H: 10µsec/div.

3.14 VIDEO (1/2) and RGB SW ASSYS


E 1/2
VIDEO ASSY
(AWV1799 :ELITE)
(AWV1804 :REGULAR)
• VIDEO CONNECTION BLOCK
: AUDIO SIGNAL ROUTE
: C SIGNAL ROUTE
: Y SIGNAL ROUTE
R-Y : R-Y SIGNAL ROUTE
B-Y : B-Y SIGNAL ROUTE
P
CN204
E4
KM250MA6
CN5610
+35V
+35V
A. GND
A. GND
12V
P.D
U7
J503
J504
J502
J505
R5646 2W
R5645 2W
+35V
12V
AUDIO(1:8)
CN5601
AKP1161-
U9
AUDIO-L
AUDIO-R
VAL_L
VAL_R
CENT_SW
V_F_MUTE
V_F_SW
SDA4
SCL4
V_OX1
V_OX2
TV_MUTE
MON_MUTE
V_Y
C
SUB_V_Y
SUB_C
1Y
1R_Y
1B_Y
2Y
2R_Y
2B_Y
Pr
Pb
Y
GND_A
12V
9V
B 2/2
CN6205
A8
U10
A.MUTE
SDA2
A_MUTE2
SCL2
RGB.SEL
V.BLK0
AKP1161-
CN5603
A 3/9
CN2454
T8
MCCY
SCCY
H.BLK
OSD.R
OSD.B
VM.BLK
CCD.BLK
CCD.B
D5612
D5604
D5605
D5603
R5641 22K
J524
J523
F
RGB SW ASSY
(AWZ6468)
Q1
KM250NA8L
CN5091
RGB.V
RGB.H
RGB.R
RGB.G
RGB.B
GND_A
RGB.SW
+5V
R5091 75
R5092 75
R5093 75
R5095
R5094
R5096 100
S5091 ASH1029-
AKP1195- CN5092
RGB SYNC MUTE BLOCK
9V
2.9V
C5601 100/10
C5602 100/10
R5601 24k
R5602 24k
R5603 6.8k
R5604 6.8k
R5605 100
R5606 100
R5607 4.7k
R5608 4.7k
R5609 100
R5610 100
R5611 22k
R5612 22k
R5613 22k
Q5601
Q5602
Q5603
Q5604
Q5605
U8
KP250NA8
CN5606
RGB.V
RGB.H
RGB.R
RGB.G
RGB.B
GND_A
RGB.SW
+5V
5V
ATH-059-
U11
AKP1186-
CN5605
MCCY
SCCY
DR_Y
DB_Y
DY
H.BLK
RGB.H
RGB.V
RGB.SEL
RGB.R
RGB.G
RGB.B
R-Y
B-Y
TR_Y
TB_Y
TY
SCP
MHP
MVP
SDA3
SCL3
S.SW
RS
PASS
S_CLK
S_DATA
S_ENB
S_BUSY
CLK
DATA
G.ENB
G.RST
GND_A
A 7/9
CN7501
T7
E 2/2
U1
KM200NA13
CN5608
12V
9V
9V
11V
5V
5V
5V
GND
P
CN203
E3
L5601
C5612 1K/16
C5626 0.01
YF
12V
J528
J529
ATH-059-
L5602
D5619
IC5602
PQ30RV11(A)
VIN
VOUT
VADJ
GND
R5711 (F) 1.8k
R5644 (F) 15k
R5643 (F) 2.7k
C5628 0.01
C5610 1K/16
C5613 470/16
C5627 0.01
9V
L5603
5V
D5620
IC5601
PQ3RF23
IN
OUT
GND
CNT
3.3V
0.22 3W R5712
0.22 3W R5663
ATH-059-
L5605
C5607 2.2K/10
C5624 0.01
C5623 0.01
C5622 2.2K/10
C5625 0.01
C5608 2.2K/10
GND_A
GND_1
REGULATOR BLOCK


AUDIO P. D. BLOCK
U4
KM200IA12
CN5609
NC
NC
+35V
+35V
GND_A
GND_A
SP_L
L_GND
SP_R
R_GND
STB5V
12V (2)
H 1/12
CN3001
Y3
G
CN1202
X2
12V
Q5621
R5652
100
R5650
220
R5653
33k
R5648
47k
Q5620
R5654
100K
R5655
100K
R5649
4.7k
C5619
10/50
R5647
220k
+35V
C5617
1K/25
C5616
1K/25
D5611
D5609
D5610
D5608
R5657
1.5k 1/2W
R5656
1.5k 1/2W
U15
L
L_GND
R
R_GND
TO SPEAKER
CN5611
KM250MA4
U6
U3
CN5607
KM200IA11
VAL_L
GND_A
VAL_R
GND_A
AUDIO_L
GND_A
AUDIO_R
A.MUTE
A. MUTE2
SDA2
SCL2
G
CN1201
X1
SDA2
SCL2
ABL
ASPECT SW
R_YD
B_YD
YD
DH.BLK
AUX.SW
D.CLP
V.BLK1
OSD.HALF
OSD.G
OSD.BLK
CCD.R
CCD.G
J516
J517
J510
J511
J518
J519
J520
J521
J512
J525
J513
J522
J508
J509
J507
J506
J533
J534
J514
J515
R-Y
B-Y
AKP1186-
CN5602
MAIN(1:3)
CONT(1:9)
OSD(1:11)
DH.BLK
RGB.SEL
R-Y
B-Y
R_YD
B_YD
YD
E 2/2
SDA2
SCL2
ABL
ASPECT.SW
DH.BLK
AUX.SW
D.CLP
V.BLK1
RGB.SEL
OSD.R
OSD.B
OSD.HALF
OSD.G
OSD.BLK1
CCD.R
CCD.G
CCD.B
CCD.BLK
OSD.BLK2
RORAPL
BORAPL
GORAPL
V.MUTE
V.MUTE2
APL BLOCK
APL WHITE 3.80V
BLACK 3.65V
R5621
100
Q5611
R5629
8.2k
DH BLK
3.66V
OSD HALF
4.37V
C5622
100/10
R5658
15k
R5661
2.2k
7.1V
R5660
100
Q5622
R5659
22k
D5601
R5627
3.9k
R5622
10K
C5605
R5623
10K
U5
DR_Y
DB_Y
DY
J526
C5604
100/16
C5603
0.01
33p
33p
D5613
D5614
C5629
15p
R5614
2.2k
R5708
5.6k
R5619
2.7k
Q5606
R5638
100
Q5613
Q5618
R5671
47
R5633
100
R5632
1.2k
D5615
D5616
C5630
15p
R5615
2.2k
R5709
5.6k
R5617
2.7k
Q5607
R5639
100
Q5614
Q5617
R5672
47
R5634
100
R5631
1.2k
RGB(1:3)
RORAPL
BORAPL
D5617
D5618
C5631
15p
R5616
2.2k
R5710
5.6k
R5618
2.7k
Q5608
R5640
100
Q5615
Q5616
R5635
100
R5673
47
R5630
1.2k
GORAPL
R5637
22k
Q5619
R5636
22k
12V
9V
5V
11V
3.3V
AKP1161-
CN5604
SWITCHING BLOCK of RGB/APL
H 1/12
CN3002
Y2
J527
RGB
APL
DC2.7V 0.5Vp-p
DC7.4V max 0.3Vp-p
DC2.7V 0.5Vp-p
DC7.4V max 0.3Vp-p
DC2.25V 0.5Vp-p
DC7.4V max 0.3Vp-p
2SC1740S(RS)-T
2SA933S(RS)-T
MTZJ11-TP
1SS254-TP

- Resistor indicated in ohm,1/4W+5% tolerance unless otherwise noted.k:k ohm,M:M ohm
- Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 50V except Electrolytic capacitor.

	ELITE	REGULAR
R–Y	DC4.7V 0.9Vp-p	DC4.7V 1.1Vp-p
B–Y	DC3.7V 0.5Vp-p	DC3.7V 0.7Vp-p
Y	NTSC DC4.0V 0.7Vp-p OTHER DC4.05V 0.7Vp-p	DC4.0V 0.7Vp-p DC4.05V 0.7Vp-p

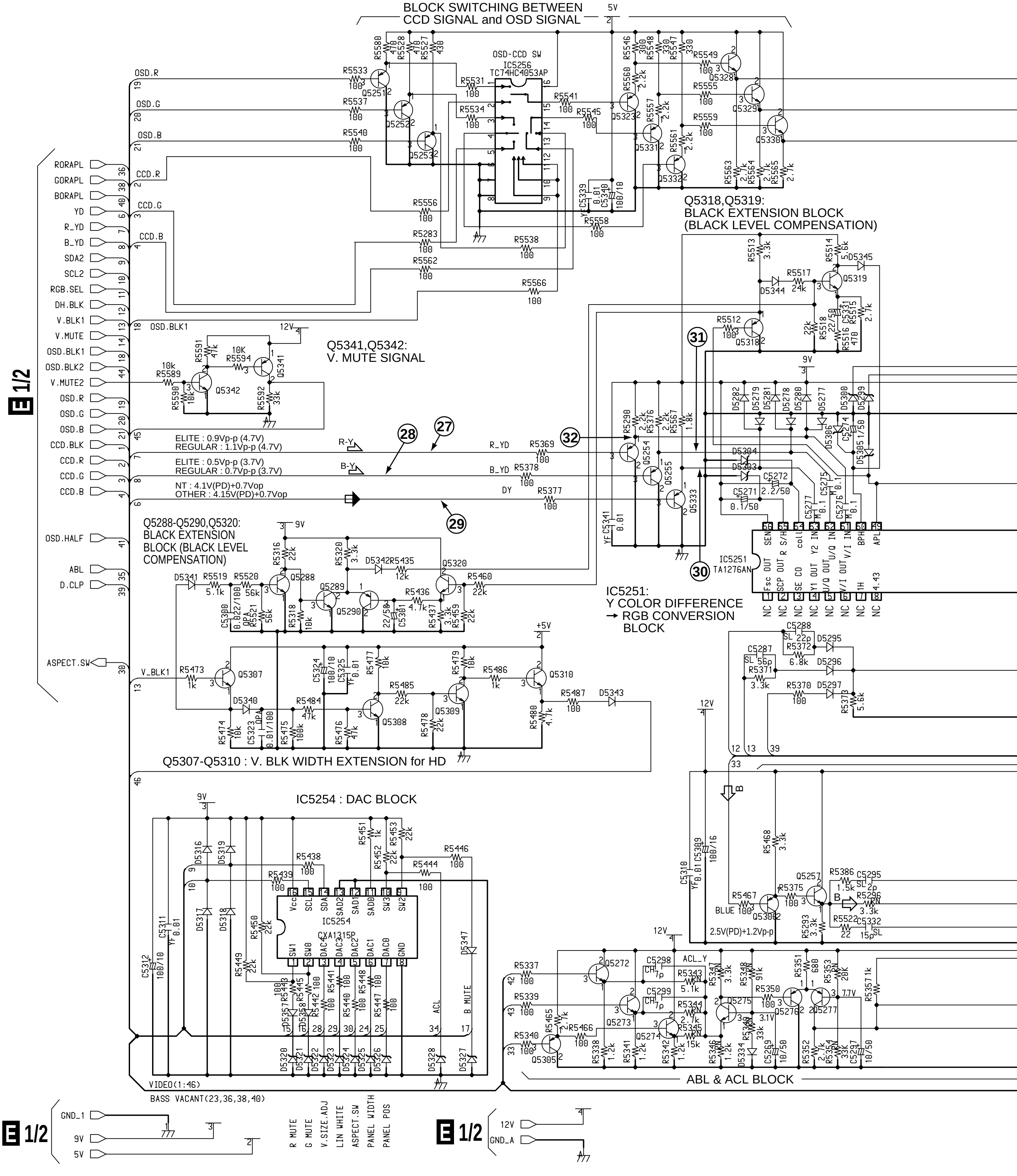
CONTROL LINE

	HI	LOW
ASPECT SW	4:3 ON	4:3 OFF
RGB SEL	RGB	OTHER
AUX SW	NTSC	OTHER
PD	PD ON	PD OFF

PALSE LINE (V)

	HI	LOW
OSD R(G,B)	1	0
OSD HALF	5	0
OSD BLK	5	0
CCD R(G,B)	3.1	0
CCD BLK	5	0
D CLP	5.6	0.6
DH BLK	5	0.3
V BLK1	3.6	0

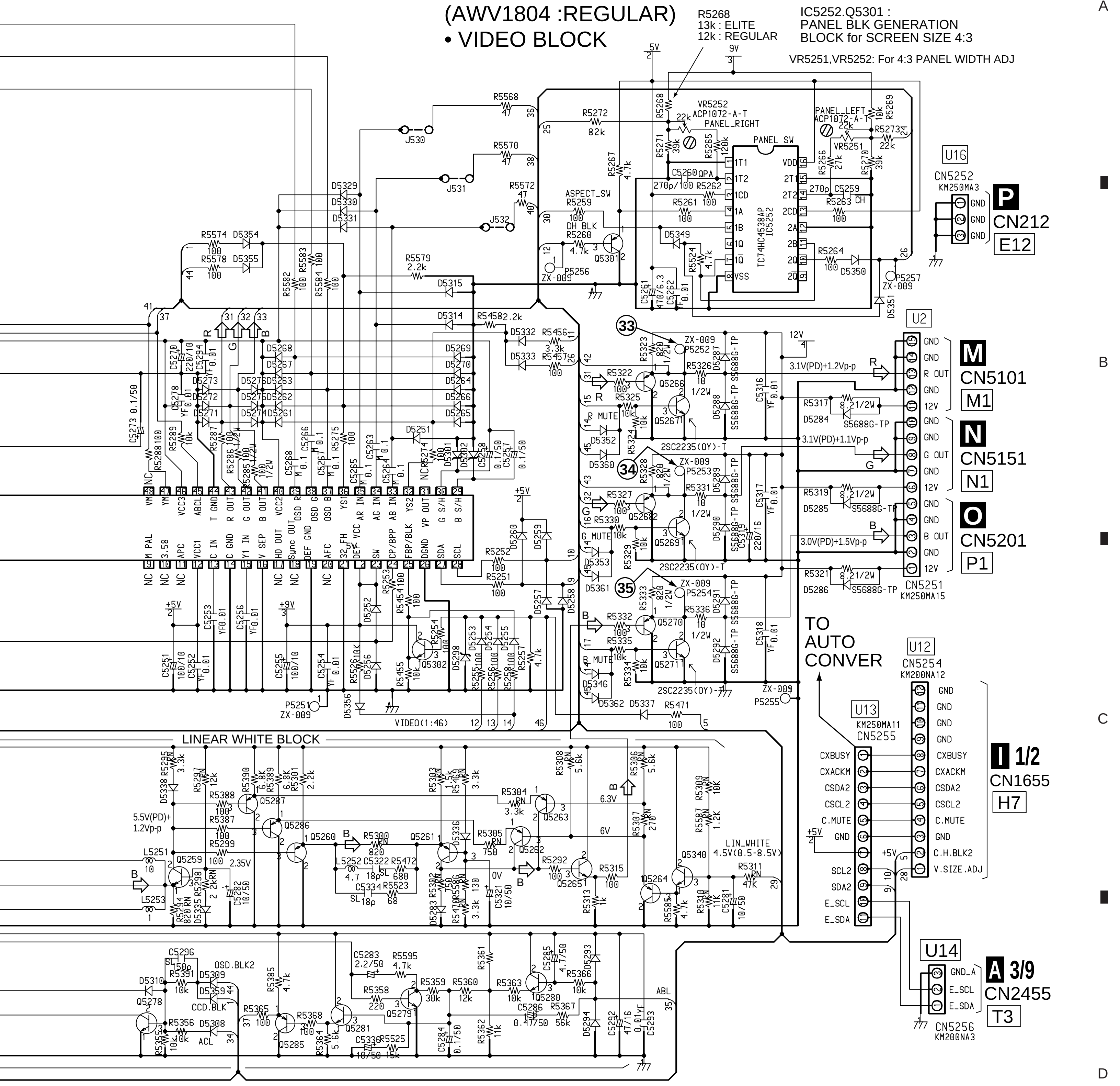
3.15 VIDEO ASSY (2/2)


BLOCK SWITCHING BETWEEN
CCD SIGNAL and OSD SIGNAL
OSD-CCD SW
IC5256
TC74HC4053AP
5V
OSD.R
OSD.G
OSD.B
CCD.R
CCD.G
CCD.B
OSD.BLK1
RORAPL
GORAPL
BORAPL
YD
R_YD
B_YD
SDA2
SCL2
RGB.SEL
DH.BLK
V.BLK1
V.MUTE
OSD.BLK1
OSD.BLK2
V.MUTE2
OSD.R
OSD.G
OSD.B
CCD.BLK
CCD.R
CCD.G
CCD.B
OSD.HALF
ABL
D.CLP
ASPECT.SW
E 1/2
Q5318,Q5319:
BLACK EXTENSION BLOCK
(BLACK LEVEL COMPENSATION)
Q5341,Q5342:
V. MUTE SIGNAL
ELITE : 0.9Vp-p (4.7V)
REGULAR : 1.1Vp-p (4.7V)
ELITE : 0.5Vp-p (3.7V)
REGULAR : 0.7Vp-p (3.7V)
NT : 4.1V(PD)+0.7Vop
OTHER : 4.15V(PD)+0.7Vop
R-Y
B-Y
R_YD
B_YD
DY
㉗
㉘
㉙
㉚
㉛
㉜
Q5288-Q5290,Q5320:
BLACK EXTENSION
BLOCK (BLACK LEVEL
COMPENSATION)
IC5251
TA1276AN
IC5251:
Y COLOR DIFFERENCE
→ RGB CONVERSION
BLOCK
V_BLK1
Q5307-Q5310 : V. BLK WIDTH EXTENSION for HD
IC5254 : DAC BLOCK
IC5254
CXA1315P
2.5V(PD)+1.2Vp-p
BLUE
ABL & ACL BLOCK
VIDEO(1:46)
BASS VACANT(23,36,38,40)
GND_1
9V
5V
R MUTE
G MUTE
V.SIZE.ADJ
LIN WHITE
ASPECT.SW
PANEL WIDTH
PANEL POS
12V
GND_A
E 1/2

E 2/2

E 2/2 VIDEO ASSY (AWV1799 :ELITE) (AWV1804 :REGULAR) • VIDEO BLOCK

➡ : Y SIGNAL ROUTE
R-Y ⇨ : R-Y SIGNAL ROUTE
B-Y ⇨ : B-Y SIGNAL ROUTE
R, G or B ⇨ : R, G or B SIGNAL ROUTE


R5268
13k : ELITE
12k : REGULAR
IC5252.Q5301 :
PANEL BLK GENERATION
BLOCK for SCREEN SIZE 4:3
VR5251,VR5252: For 4:3 PANEL WIDTH ADJ
5V
9V
R5568 47
R5570 47
R5572 47
J530
J531
J532
R5272 82k
VR5252 ACP1072-A-T PANEL_RIGHT 22k
PANEL_LEFT ACP1072-A-T 22k
VR5251
R5273 22k
R5269 10k
R5270 39k
R5266 27k
R5271 39k
R5265 120k
R5267 4.7k
PANEL SW
IC5252 TC74HC4538AP
1T1 1T2 1CD 1A 1B 1Q 1Q VSS
VDD 2T1 2T2 2CD 2A 2B 2Q 2Q
C5260 QPA 270p/100
R5262 100
R5261 100
C5259 270p CH
R5263 100
R5264 100
D5349
R5524 4.7k
D5350
ASPECT_SW
R5259 100
DH BLK
R5260 4.7k
Q5301
P5256 ZX-009
P5257 ZX-009
C5261 470/6.3
C5262 YF0.01
D5351
U16
CN5252 KM250MA3
GND GND GND
P CN212 E12
D5329 D5330 D5331
R5574 100 D5354
R5578 100 D5355
R5582 100 R5583 100 R5584 100
R5579 2.2k
D5315
D5314
R5458 2.2k
D5332 R5456 3.3k
D5333 R5457 100
D5268 D5267 D5273 D5272 D5271 D5276 D5263 D5275 D5262 D5274 D5261
D5269 D5270 D5264 D5266 D5265
D5251
C5270 220/10
C5294 F0.01
C5278 YF0.01
C5273 0.1/50
R5288 100 R5289 10k R5287 R5286 100 R5285 100
C5268 C5266 C5267 C5265 C5264 C5263
R5275 R5274 100
D5301 D5302
C5258 0.1/50
C5257 0.1/50
VM YM VCC3 ABCL T GND R OUT G OUT B OUT VCC2 OSD R OSD G OSD B YS1 AR IN AG IN AB IN YS2 G S/H B S/H
M PAL 3.58 APC VCC1 C IN C GND Y1 IN V SEP HD OUT Sync OUT DEF GND AFC 32 FH DEF VCC SW CP/BPP FBP/BLK DGND VP OUT SDA SCL
NC NC NC NC NC NC
+5V +9V
C5253 YF0.01
C5256 YF0.01
C5251 100/10
C5252 YF0.01
C5255 100/10
C5254 YF0.01
R5526 10k
D5256 D5252 D5356
P5251 ZX-009
R5252 100
R5251 100
D5260 D5259 D5257 D5258
R5253 100
R5454 100
R5254 100
Q5302
R5455 10k
D5298
D5253 D5254 D5255
R5257 4.7k
R5256 100
R5258 100
VIDEO(1:46)
33 34 35
P5252 ZX-009
P5253 ZX-009
P5254 ZX-009
R5323 820 1/2W
R5322 100
R5325 10k
R5324
R5326 10 1/2W
Q5266 Q5267
D5287 S5688G-TP
D5288 S5688G-TP
C5316 YF0.01
R MUTE
D5352 D5360
2SC2235(OY)-T
R5328 820 1/2W
R5327 100
R5330 10k
R5329 10k
R5331 10 1/2W
Q5268 Q5269
D5289 D5290 S5688G-TP
C5317 YF0.01
C5319 220/16
G MUTE
D5353 D5361
R5333 820 1/2W
R5332 100
R5335 100
R5334 10k
R5336 10 1/2W
Q5270 Q5271
D5291 D5292 S5688G-TP
C5318 YF0.01
B MUTE
D5346 D5362 D5337
R5471 100
P5255 ZX-009
12V
3.1V(PD)+1.2Vp-p
3.1V(PD)+1.1Vp-p
3.0V(PD)+1.5Vp-p
R5317 8.2 1/2W D5284 S5688G-TP
R5319 8.2 1/2W D5285 S5688G-TP
R5321 8.2 1/2W D5286 S5688G-TP
U2
GND GND R OUT GND 12V GND GND G OUT GND 12V GND GND B OUT GND 12V
CN5251 KM250MA15
M CN5101 M1
N CN5151 N1
O CN5201 P1
TO AUTO CONVER
U12 CN5254 KM200NA12
U13 KM250MA11 CN5255
CXBUSY CXACKM CSDA2 CSCL2 C.MUTE GND
SCL2 SDA2 E_SCL E_SDA
CXBUSY CXACKM CSDA2 CSCL2 C.MUTE GND C.H.BLK2 V.SIZE.ADJ
I 1/2 CN1655 H7
U14
GND_A E_SCL E_SDA
CN5256 KM200NA3
A 3/9 CN2455 T3
LINEAR WHITE BLOCK
R5295 3.3k
D5338
R5297 12k
R5390 6.8k R5389 6.8k R5301 2.2k
R5388 100 Q5287
R5387 100
R5299 100
Q5286
5.5V(PD)+ 1.2Vp-p
L5251 10
Q5259
L5253 1
R5294 820 R5298 2.2k D5335
C5282 10/50
2.35V
Q5260
R5300 820
L5252 4.7 C5322 18p R5472 680
C5334 18p R5523 68
SL
Q5261
R5303 1.5k R5304 3.3k
R5302 750
D5283
R5470 2k
R5305 750
Q5262 Q5263
D5336 130 3.3k
C5321 10/50
0V
R5292 100
Q5265
R5308 5.6k
R5306 5.6k
R5307 270
6.3V
6V
R5315 100
R5313 1k
D5264
R5587 1.2k
R5309 10K
Q5340
LIN_WHITE 4.5V(0.5-8.5V)
R5311 47K
R5585 4.7k
R5310 11k
C5341 10/50
C5296 SL 150p
R5391 10k
OSD.BLK2
D5309 D5359
D5310
Q5278
CCD.BLK
R5356 10k D5308
R5355 10k
ACL
R5385 4.7k
R5365 100
Q5285
R5368 100
Q5281
R5364 5.6k
C5283 2.2/50 R5595 4.7k
R5358 220
C5336 10/50 R5525 15k
Q5279
R5359 30k R5360 12k
C5284 0.1/50
R5361
R5362 11k
R5363 10k
C5285 4.7/50
Q5280
D5293 R5366 10k
C5286 0.47/50
R5367 56k
D5294
C5292 47/16
C5293 0.01YF
ABL
2SC1740S(RS)-T
MTZJ11-TP
2SA933S(RS)-T
1SS254-TP

A B C D

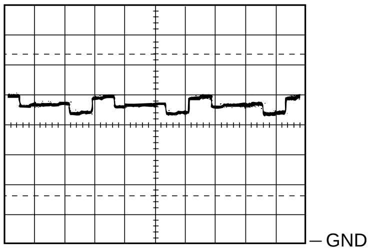
- Resistor indicated in ohm,1/4W+5% tolerance unless otherwise noted.k:k ohm,M:M ohm
- Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 50V except Electrolytic capacitor.

This sheet name is 11ku-video3

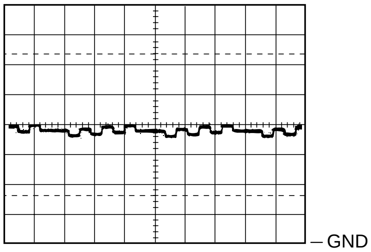
E 2/2 VIDEO ASSY (2/2)

Input signal
Video signal : EIA full color-bar
Picture quality : Standard
Range :DC range (Unless otherwise noted)

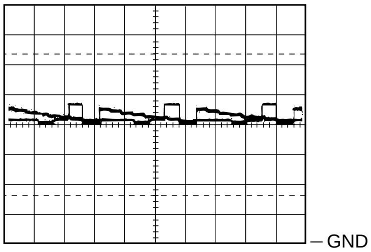
㉗ Foot of R5369 (Sharpness output R-Y)
V: 1V/div. H: 10µsec/div.



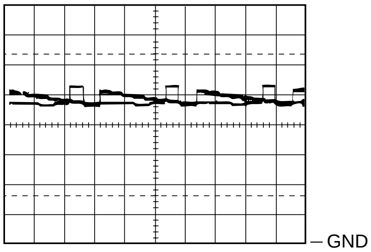
㉘ Foot of R5378 (Sharpness output B-Y)
V: 1V/div. H: 10µsec/div.



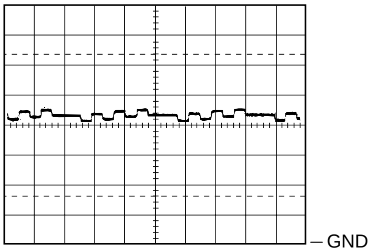
㉙ Foot of R5377 (Sharpness output Y)
V: 1V/div. H: 10µsec/div.



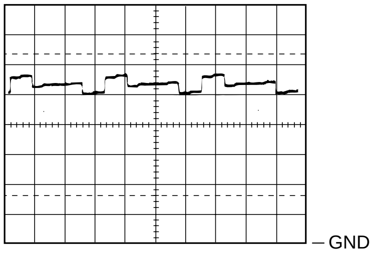
㉚ Q5333 Emitter (Y input)
V: 1V/div. H: 10µsec/div.



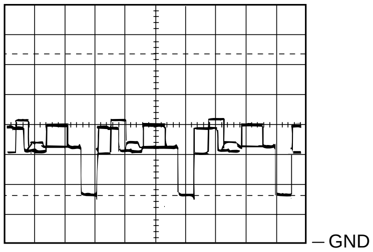
㉛ Q5255 Emitter (B-Y input)
V: 1V/div. H: 10µsec/div.



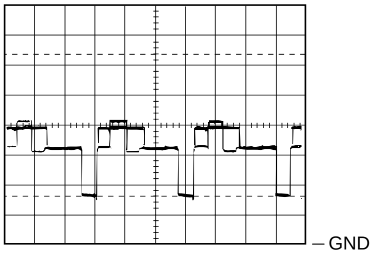
㉜ Q5254 Emitter (R-Y input)
V: 1V/div. H: 10µsec/div.



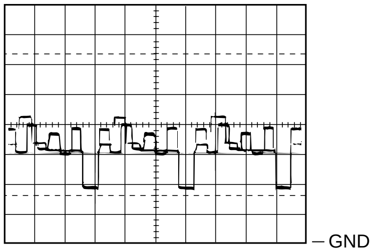
㉝ P5252 (R OUT)
V: 1V/div. H: 10µsec/div.



㉞ P5253 (G OUT)
V: 1V/div. H: 10µsec/div.



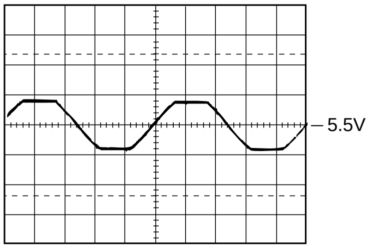
㉟ P5254 (B OUT)
V: 1V/div. H: 10µsec/div.



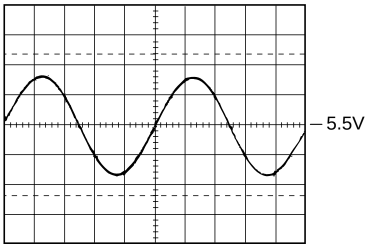
G AUDIO ASSY

Input signal
Video signal : EIA full color-bar , Picture quality : Standard
f = 1kHz , Vol. : MAX (Unless otherwise noted)   Vin = 0.4rms
Range :DC range (Unless otherwise noted)

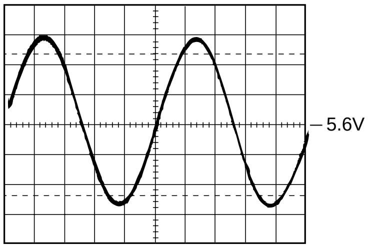
㊱ -1 **CN1201-pin 11**
V: 5V/div. H: 0.2msec/div.



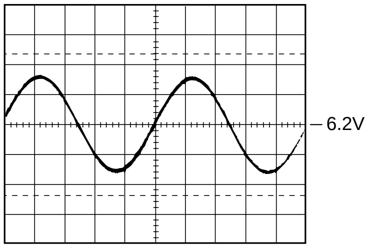
㊱ -2 **CN1201-pin 11**
V: 2V/div. H: 0.2msec/div.
- Vol : 40



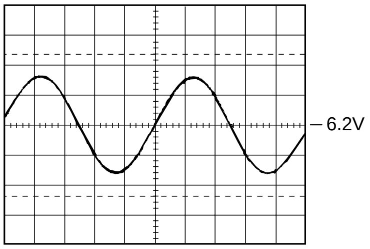
㊲ **CN1201-pin 7**
V: 0.2V/div. H: 0.2msec/div.



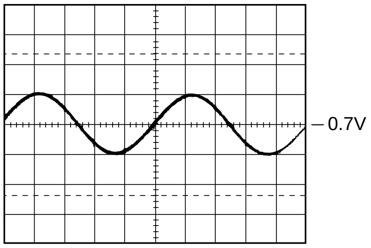
㊳ **IC1201-pin 26**
V: 0.2V/div. H: 0.2msec/div.



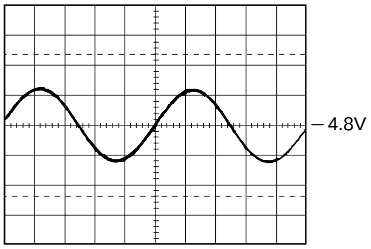
㊴ **IC1201-pin 14, 17**
V: 0.2V/div. H: 0.2msec/div.



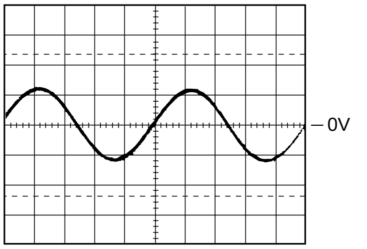
㊵ **C1229 + (plus) side**
V: 0.2V/div. H: 0.2msec/div.



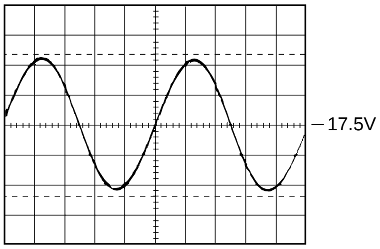
㊶ **Q1201 Base**
V: 0.2V/div. H: 0.2msec/div.



㊷ **C1241 – (minus) side**
V: 0.2V/div. H: 0.2msec/div.



㊸ **CN1202-pin 7**
V: 5V/div. H: 0.2msec/div.



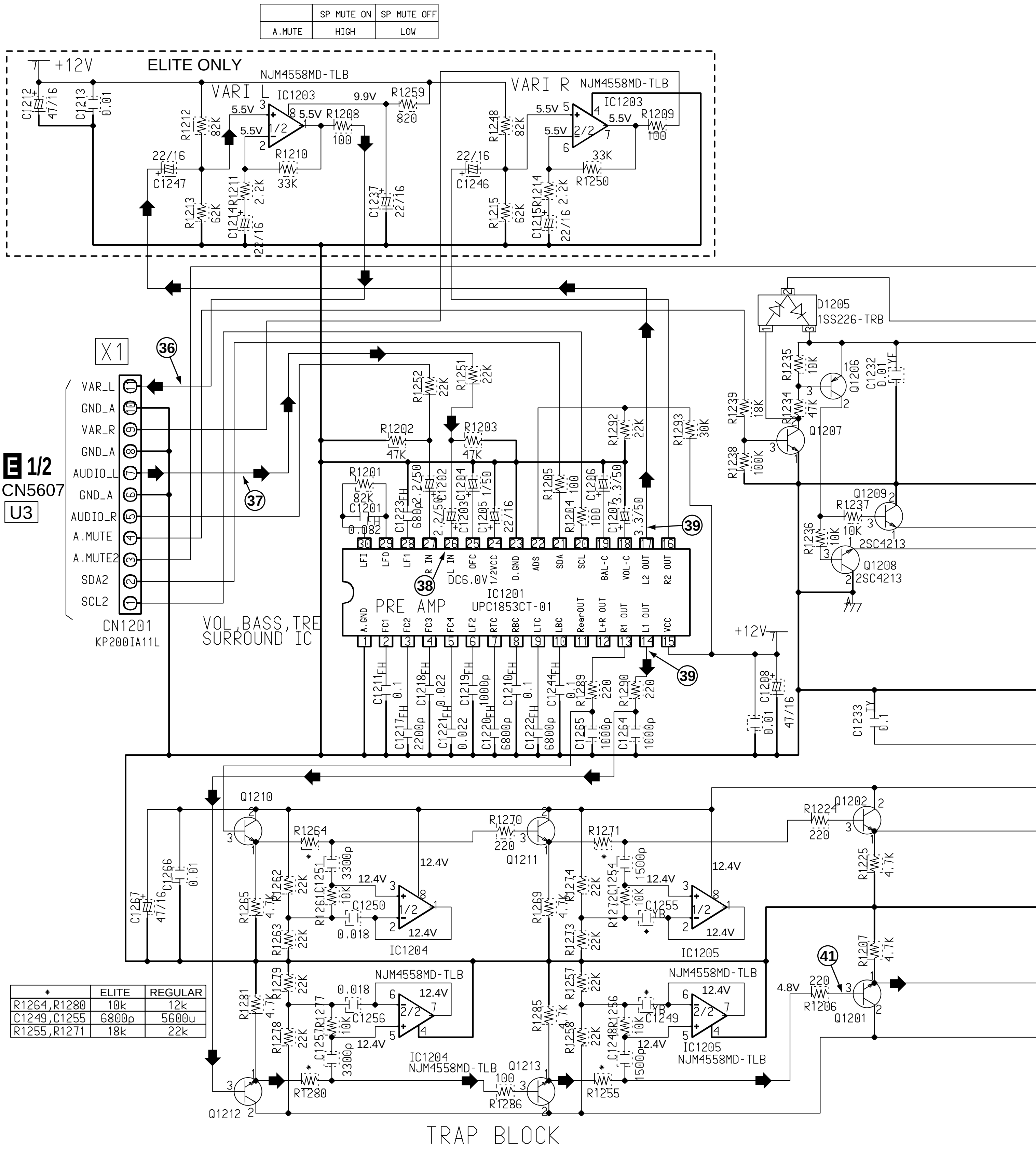
IC1201 (UPC1853)

Pin No.	Voltage(V)	Pin No.	Voltage(V)
1	0	16	6.2
2	6.2	17	6.2
3	6.2	18	6.2
4	6.2	19	4.8
5	6.2	20	-
6	6.2	21	-
7	6.2	22	5.1
8	6.2	23	0
9	6.2	24	6.2
10	6.2	25	6.2
11	6.2	26	6.2
12	6.2	27	6.2
13	6.2	28	6.2
14	6.2	29	6.2
15	12.4	30	6.2

IC1202 (LA4280)

Pin No.	Voltage (V)
1	0.8
2	1.1
3	0.7
4	17.5
5	0
6	0.7
7	1.1
8	0.8
9	0
10	0
11	17.5
12	35.5
13	17.5
14	0

3.16 AUDIO ASSY



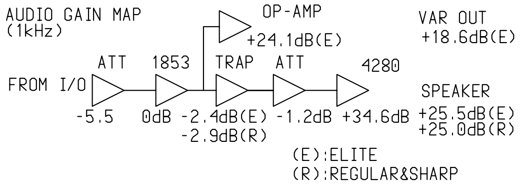
	SP MUTE ON	SP MUTE OFF
A.MUTE	HIGH	LOW

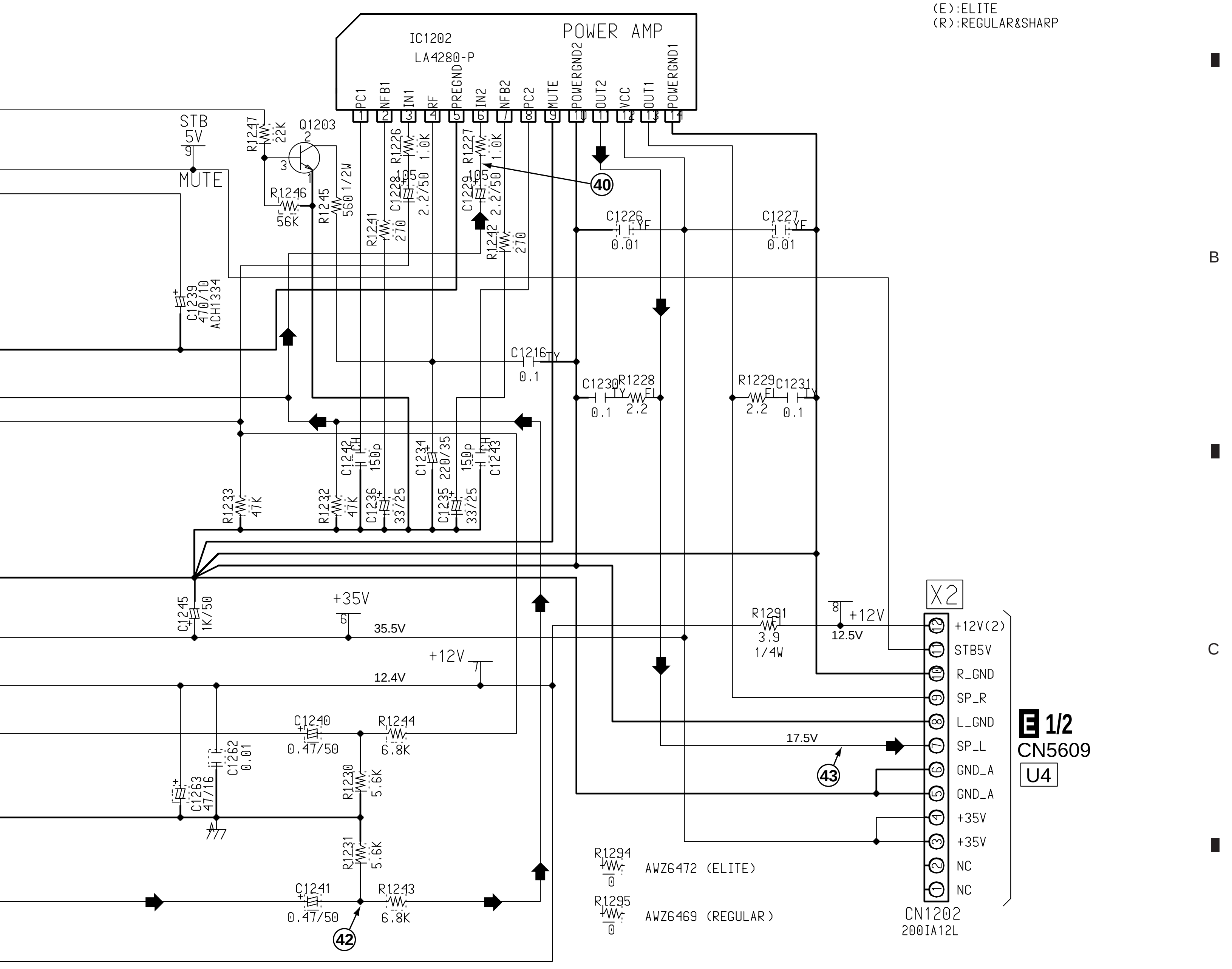
*	ELITE	REGULAR
R1264,R1280	10k	12k
C1249,C1255	6800p	5600u
R1255,R1271	18k	22k

A
B
C
D
ELITE ONLY
+12V
VARI L
VARI R
NJM4558MD-TLB
IC1203
C1212 47/16
C1213 0.01
R1212 82K
R1213 62K
R1211 2.2K
R1210 33K
R1208 100
R1259 820
R1209 100
R1248 82K
R1215 62K
R1214 2.2K
R1250 33K
C1247 22/16
C1246 22/16
C1214 22/16
C1215 22/16
C1237 22/16
5.5V
9.9V
X1
E 1/2
CN5607
U3
VAR_L
GND_A
VAR_R
GND_A
AUDIO_L
GND_A
AUDIO_R
A.MUTE
A.MUTE2
SDA2
SCL2
CN1201
KP200IA11L
VOL,BASS,TRE
SURROUND IC
PRE AMP
IC1201
UPC1853CT-01
DC6.0V
R1201 82K
C1201 0.082
R1202 47K
R1203 47K
R1252 22K
R1251 22K
R1205 100
R1204 100
R1292 22K
R1293 30K
C1223 680p
C1202 2.2/50
C1203 2.2/50
C1204 2.2/50
C1205 1/50
C1206 3.3/50
C1207 3.3/50
LFI LFO LF1 R IN L IN OFC 1/2VCC D.GND ADS SDA SCL BAL-C VOL-C L2 OUT R2 OUT
A.GND FC1 FC2 FC3 FC4 LF2 RTC RBC LTC LBC RearOUT L+R OUT R1 OUT L1 OUT VCC
C1211 0.1
C1217 2200p
C1218 0.022
C1221 0.022
C1219 1000p
C1220 6800p
C1210 0.1
C1222 6800p
C1244 0.1
R1289 220
R1290 220
C1265 1000p
C1264 1000p
C1208 0.01
47/16
C1233 0.1
C1232 0.01
D1205
1SS226-TRB
R1235 10K
R1234 47K
R1239 18K
R1238 100K
Q1206
Q1207
Q1209
Q1208
2SC4213
R1237 10K
R1236 10K
36
37
38
39
41
Q1210
Q1211
Q1212
Q1213
Q1202
Q1201
R1264
R1270 220
R1271
R1224 220
R1225 4.7K
R1207 4.7K
R1206 220
4.8V
12.4V
C1251 3300p
C1254 1500p
C1250 0.018
C1255
R1261 10K
R1272 10K
R1262 22K
R1263 22K
R1265 4.7K
R1269 4.7K
R1274 22K
R1273 22K
C1266 0.01
C1267 47/16
IC1204
IC1205
R1281 4.7K
R1279 22K
R1278 22K
R1277 10K
C1256 0.018
C1257 3300p
R1280
R1286 100
R1285 4.7K
R1257 22K
R1258 22K
R1256 10K
C1249
C1248 1500p
R1255
TRAP BLOCK

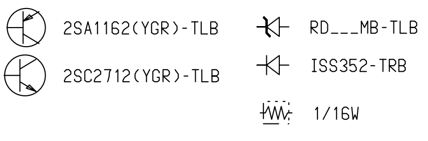
G AUDIO ASSY (AWZ6472 : ELITE) (AWZ6469 : REGULAR)

➡ : AUDIO SIGNAL ROUTE

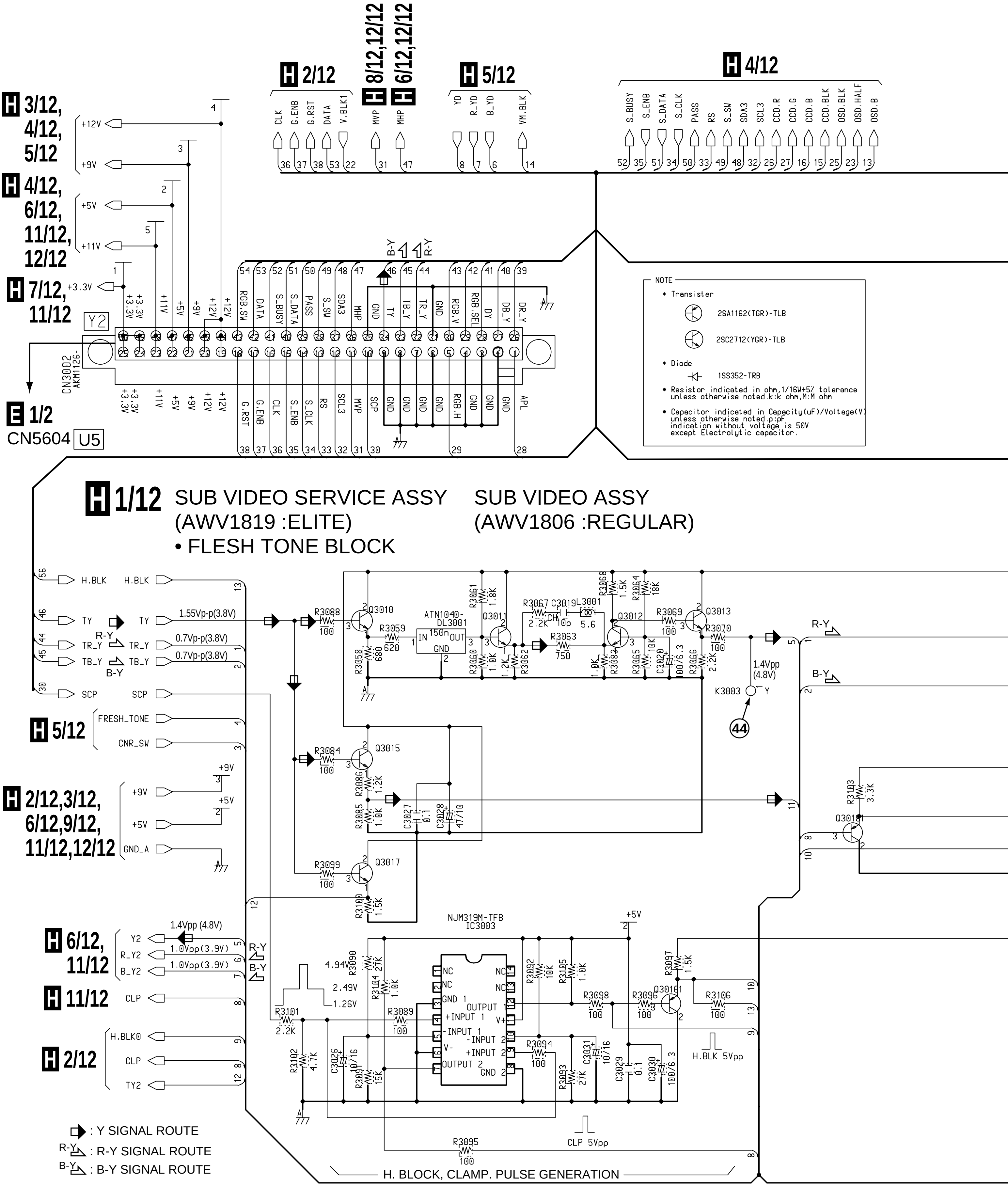

AUDIO GAIN MAP
(1kHz)
OP-AMP
+24.1dB(E)
VAR OUT
+18.6dB(E)
ATT
1853
TRAP
ATT
4280
FROM I/O
-5.5
0dB
-2.4dB(E)
-2.9dB(R)
-1.2dB
+34.6dB
SPEAKER
+25.5dB(E)
+25.0dB(R)
(E):ELITE
(R):REGULAR&SHARP

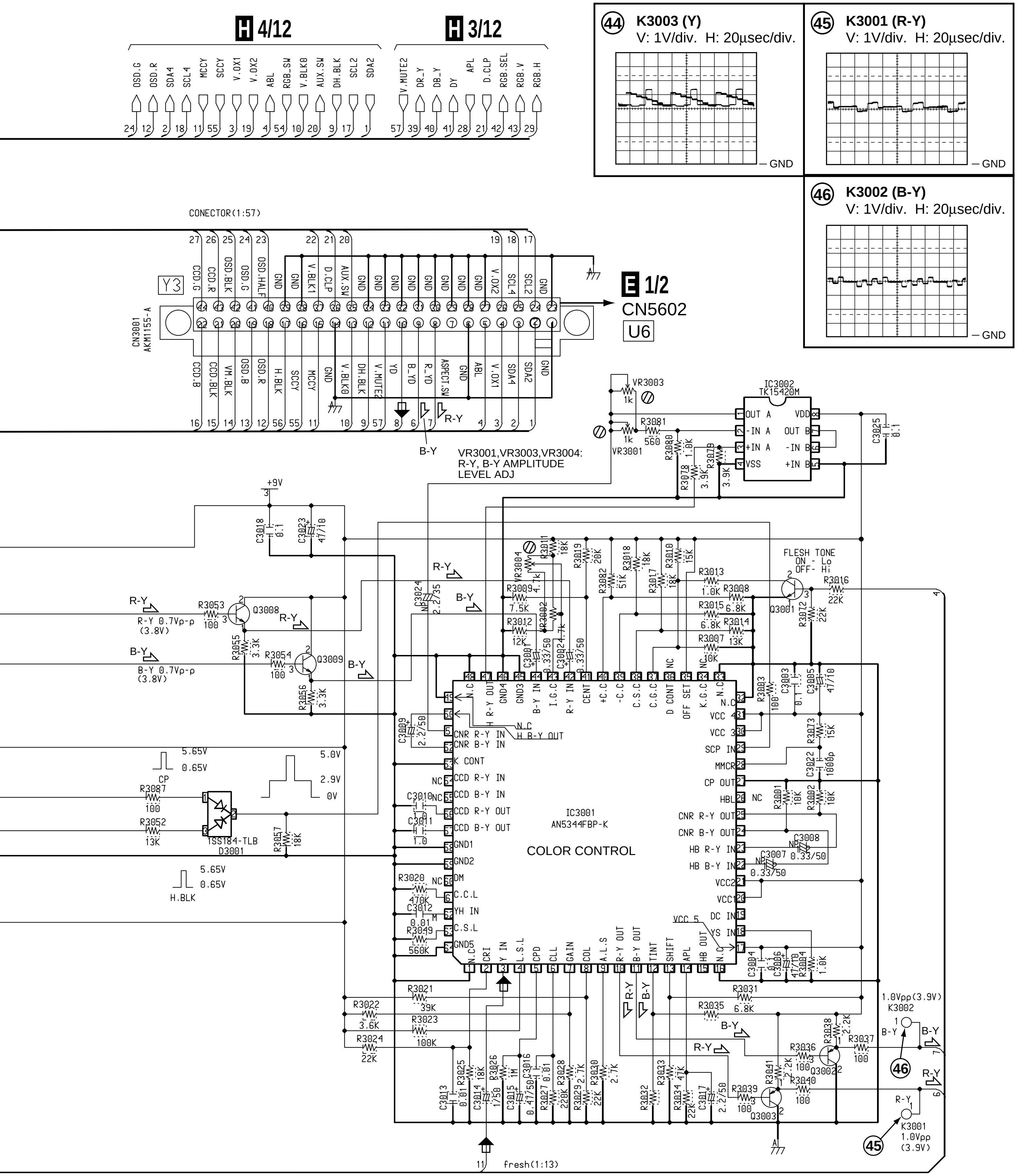

IC1202
LA4280-P
POWER AMP
1 PC1
2 NFB1
3 IN1
4 RF
5 PREGND
6 IN2
7 NFB2
8 PC2
9 MUTE
10 POWERGND2
11 OUT2
12 VCC
13 OUT1
14 POWERGND1
STB 5V
9
MUTE
R1247 22K
Q1203
R1246 56K
R1245 560 1/2W
R1226 1.0K
C1228 105 2.2/50
R1227 1.0K
C1229 105 2.2/50
R1241 270
R1242 270
40
C1226 YF 0.01
C1227 YF 0.01
C1239 470/10 ACH1334
C1216 TY 0.1
C1230 TY 0.1
R1228 FL 2.2
R1229 FL 2.2
C1231 TY 0.1
C1242 CH 150p
C1234 220/35
C1243 CH 150p
R1233 47K
R1232 47K
C1236 33/25
C1235 33/25
C1245 1K/50
+35V
6
35.5V
+12V
7
12.4V
R1291 3.9 1/4W
8
+12V
12.5V
X2
12 +12V(2)
11 STB5V
10 R_GND
9 SP_R
8 L_GND
7 SP_L
6 GND_A
5 GND_A
4 +35V
3 +35V
2 NC
1 NC
E 1/2
CN5609
U4
17.5V
43
C1240 0.47/50
R1244 6.8K
C1262 0.01
C1263 47/16
R1230 5.6K
R1231 5.6K
C1241 0.47/50
R1243 6.8K
42
R1294 0
AWZ6472 (ELITE)
R1295 0
AWZ6469 (REGULAR)
CN1202
200IA12L

Notes
1.RESISTORS
Indicated in Ω
tolerance unless otherwise noted k Ω
2.CAPASITORS
Indicated in capacity(uF)/Voltage unless
otherwise noted p pF
Indication without voltage is 50V
except electrolytic capacitor.

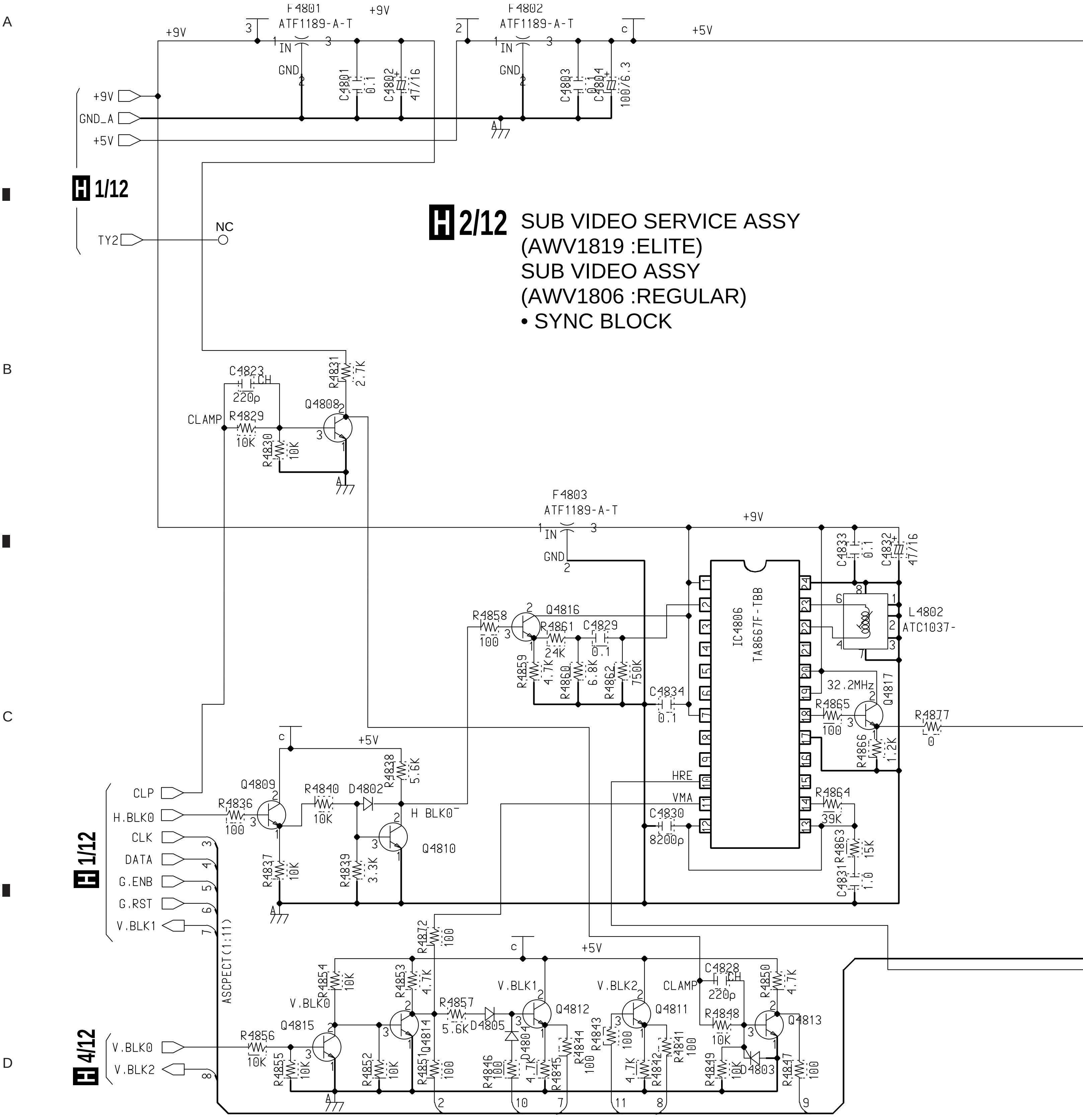

2SA1162(YGR)-TLB
2SC2712(YGR)-TLB
RD___MB-TLB
ISS352-TRB
1/16W

3.17 SUB VIDEO SERVICE and SUB VIDEO ASSYS (1/12)


H 3/12, 4/12, 5/12
+12V
+9V
H 4/12, 6/12, 11/12, 12/12
+5V
+11V
H 7/12, 11/12
+3.3V
Y2
CN3002 AKM1126-
E 1/2
CN5604
U5
H 2/12
CLK G.ENB G.RST DATA V.BLK1
H 8/12,12/12
MVP
H 6/12,12/12
MHP
H 5/12
YD R_YD B_YD VM.BLK
H 4/12
S_BUSY S_ENB S_DATA S_CLK PASS RS S_SW SDA3 SCL3 CCD.R CCD.G CCD.B CCD.BLK OSD.BLK OSD.HALF OSD.B
B-Y R-Y
+3.3V +3.3V +11V +5V +9V +12V +12V RGB.SW DATA S.BUSY S_DATA PASS S_SW SDA3 MHP GND TY TB_Y TR_Y GND RGB.V RGB.SEL DY DB_Y DR_Y
+3.3V +3.3V +11V +5V +9V +12V +12V G.RST G.ENB CLK S_ENB S_CLK RS SCL3 MVP SCP GND GND GND GND RGB.H GND GND GND APL
NOTE
• Transister
2SA1162(TGR)-TLB
2SC2712(YGR)-TLB
• Diode
1SS352-TRB
• Resistor indicated in ohm,1/16W+5% tolerance unless otherwise noted.k:k ohm,M:M ohm
• Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 50V except Electrolytic capacitor.
H 1/12
SUB VIDEO SERVICE ASSY
(AWV1819 :ELITE)
• FLESH TONE BLOCK
SUB VIDEO ASSY
(AWV1806 :REGULAR)
H.BLK H.BLK
TY TY
TR_Y TR_Y
TB_Y TB_Y
SCP SCP
R-Y
B-Y
1.55Vp-p(3.8V)
0.7Vp-p(3.8V)
0.7Vp-p(3.8V)
H 5/12
FRESH_TONE
CNR_SW
H 2/12,3/12, 6/12,9/12, 11/12,12/12
+9V +5V GND_A
H 6/12, 11/12
Y2 R_Y2 B_Y2
1.4Vpp (4.8V)
1.0Vpp(3.9V)
1.0Vpp(3.9V)
H 11/12
CLP
H 2/12
H.BLK0 CLP TY2
R3088 100 Q3010 R3059 620 R3058 680
ATN1040-DL3001 IN 150n OUT GND
R3061 1.8K Q3011 R3060 1.0K R3062 1.2K
R3067 2.2K C3019 CH 10p L3001 5.6 R3063 750
R3068 1.5K R3064 18K Q3012 R3083 1.0K R3065 10K C3020 100/6.3
R3069 100 Q3013 R3070 100 R3066 2.2K
1.4Vpp (4.8V)
K3003 Y
44
R3084 100 Q3015 R3086 1.2K R3085 1.0K C3027 0.1 C3028 47/10
R3099 100 Q3017 R3100 1.5K
R3103 3.3K Q3014
NJM319M-TFB IC3003
+5V
4.94V 2.49V 1.26V
R3101 2.2K R3102 4.7K C3026 10/16 R3091 15K
R3090 27K R3104 1.0K R3089 100
NC NC GND 1 +INPUT 1 -INPUT 1 V- OUTPUT 2 NC NC OUTPUT 1 V+ -INPUT 2 +INPUT 2 GND 2
R3092 10K R3105 1.0K R3098 100 R3094 100 R3093 27K C3031 10/16
C3029 0.1 C3030 100/6.3
R3097 1.5K R3096 100 Q3016 R3106 100
H.BLK 5Vpp
CLP 5Vpp
R3095 100
H. BLOCK, CLAMP. PULSE GENERATION
: Y SIGNAL ROUTE
R-Y : R-Y SIGNAL ROUTE
B-Y : B-Y SIGNAL ROUTE

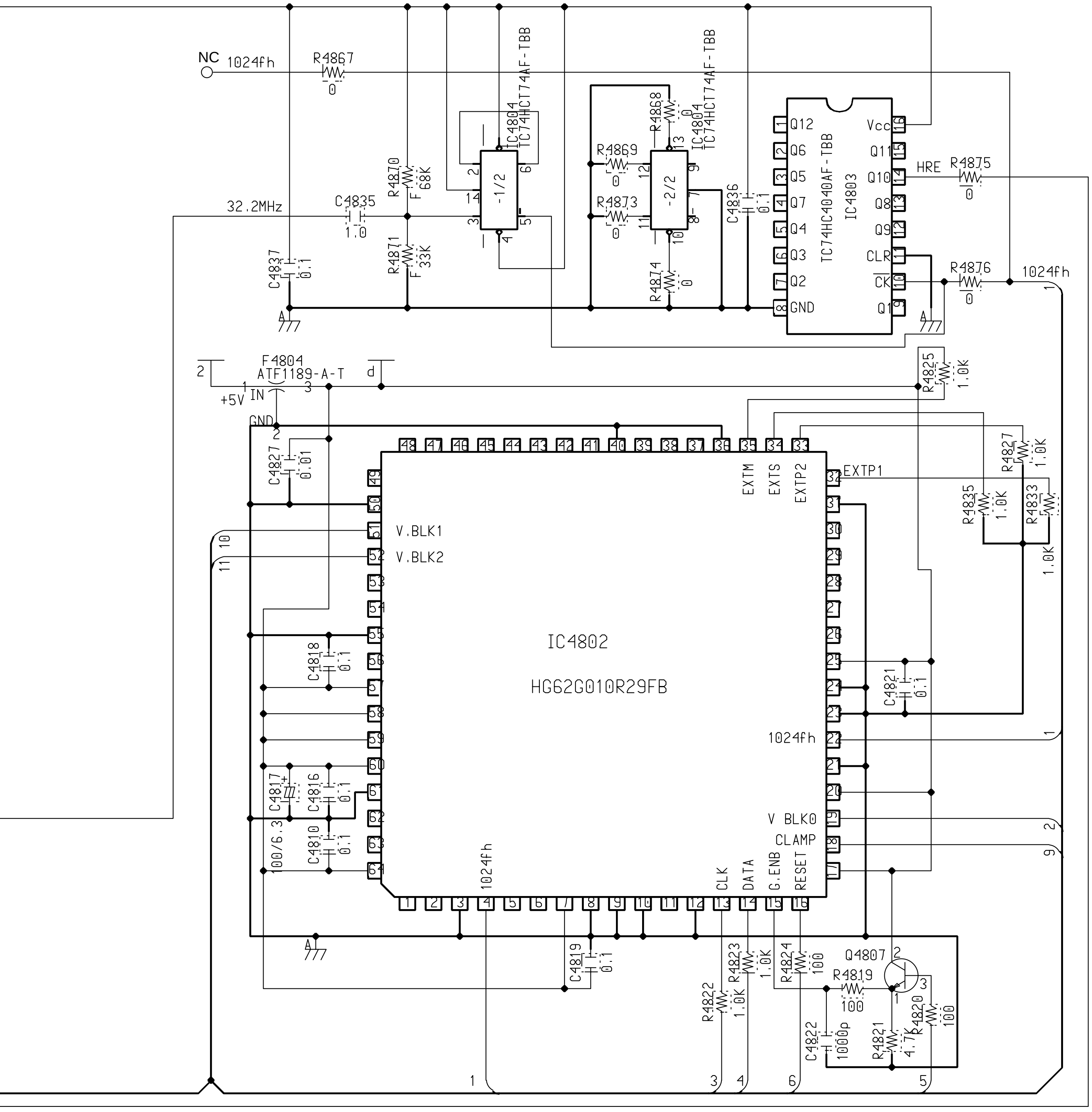

H 4/12
H 3/12
OSD.G
OSD.R
SDA4
SCL4
MCCY
SCCY
V.OX1
V.OX2
ABL
RGB.SW
V.BLKO
AUX.SW
DH.BLK
SCL2
SDA2
V.MUTE2
DR_Y
DB_Y
DY
APL
D.CLP
RGB.SEL
RGB.V
RGB.H
44 K3003 (Y) V: 1V/div. H: 20µsec/div.
45 K3001 (R-Y) V: 1V/div. H: 20µsec/div.
46 K3002 (B-Y) V: 1V/div. H: 20µsec/div.
GND
CONECTOR(1:57)
CN3001 AKM1155-A
Y3
E 1/2
CN5602
U6
CCD.G
CCD.R
OSD.BLK
OSD.HALF
V.BLK1
D.CLP
AUX.SW
CCD.B
CCD.BLK
VM.BLK
OSD.B
H.BLK
SCCY
MCCY
V.BLKO
DH.BLK
V.MUTE2
YD
B_YD
R_YD
ASPECT.SW
ABL
V.OX1
SDA4
SDA2
R-Y
B-Y
VR3003 1k
VR3001 1k
R3081 560
R3080 1.0K
R3079 3.9K
R3078 3.9K
IC3002 TK15420M
OUT A
-IN A
+IN A
VSS
VDD
OUT B
-IN B
+IN B
C3025 0.1
VR3001,VR3003,VR3004: R-Y, B-Y AMPLITUDE LEVEL ADJ
+9V
C3018 0.1
C3023 47/10
R3053 100
Q3008
R-Y 0.7Vp-p (3.8V)
B-Y 0.7Vp-p (3.8V)
R3055 3.3K
R3054 100
Q3009
R3056 3.3K
C3024 NP 2.2/35
VR3004 4.7k
R3011 18K
R3009 7.5K
VR3002 4.7k
R3012 12K
C3001 0.33/50
C3002 0.33/50
R3019 20K
R3082 51K
R3018 18K
R3017 18K
R3010 15K
R3013 1.0K
R3008 6.8K
R3015 6.8K
R3014 13K
R3007 10K
FLESH TONE ON - Lo OFF- Hi
Q3001
R3016 22K
R3072 22K
C3009 2.2/50
5.65V
0.65V
5.0V
2.9V
0V
CP
R3087 100
R3052 13K
TSS184-TLB D3001
R3057 18K
H.BLK
C3010 1.0
C3011 1.0
R3020 470K
C3012 0.01
R3049 560K
IC3001 AN5344FBP-K
COLOR CONTROL
N.C
R-Y OUT
GND4
GND3
B-Y IN
I.G.C
R-Y IN
CENT
+C.C
-C.C
C.S.C
C.G.C
D CONT
OFF SET
K.G.C
CNR R-Y IN
CNR B-Y IN
H R-Y IN
H B-Y OUT
K CONT
CCD R-Y IN
CCD B-Y IN
CCD R-Y OUT
CCD B-Y OUT
GND1
GND2
DM
C.C.L
YH IN
C.S.L
GND5
CRI
Y IN
L.S.L
CPD
CLL
GAIN
COL
A.L.S
B-Y OUT
TINT
SHIFT
HB OUT
VCC 5
YS IN
DC IN
VCC1
VCC2
HB B-Y IN
HB R-Y IN
CNR B-Y OUT
CNR R-Y OUT
HBL
CP OUT
MMCR
SCP IN
VCC 3
VCC 4
R3003 100
C3003 0.1
C3005 47/10
R3073 15K
C3022 1000p
R3001 10K
R3002 10K
C3008 NP 0.33/50
C3007 NP 0.33/50
C3004 0.1
C3006 47/10
R3004 1.0K
R3021 39K
R3022 3.6K
R3023 100K
R3024 22K
C3013 0.01
R3025 18K
C3014 1/50
R3026 1M
C3015 0.47/50
C3016 0.01
R3027 220K
R3028 2.7K
R3029 22K
R3030 2.7K
R3032
R3033 47K
R3034 22K
C3017 2.2/50
R3031 6.8K
R3035 6.8K
R3038 2.2K
R3036 100
R3037 100
Q3002
R3041 2.2K
R3039 100
R3040 100
Q3003
1.0Vpp(3.9V) K3002
K3001 1.0Vpp (3.9V)
fresh(1:13)
NC

3.18 SUB VIDEO SERVICE and SUB VIDEO ASSYS (2/12)



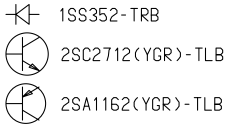
H 2/12 SUB VIDEO SERVICE ASSY
(AWV1819 :ELITE)
SUB VIDEO ASSY
(AWV1806 :REGULAR)
• SYNC BLOCK

1
2
3
4
A
B
C
D
H 1/12
+9V
GND_A
+5V
TY2
NC
F4801
ATF1189-A-T
F4802
ATF1189-A-T
F4803
ATF1189-A-T
IN
GND
C4801 0.1
C4802 47/16
C4803 0.1
C4804 100/6.3
C4823 220p CH
R4831 2.7K
CLAMP
R4829 10K
R4830 10K
Q4808
IC4806
TA8667F-TBB
C4833 0.1
C4832 47/16
L4802
ATC1037-
R4858 100
Q4816
R4861 24K
C4829 0.1
R4859 4.7K
R4860 6.8K
R4862 750K
C4834 0.1
32.2MHz
R4865 100
Q4817
R4877 0
R4866 1.2K
HRE
VMA
C4830 8200p
R4864 39K
R4863 15K
C4831 1.0
CLP
H.BLK0
CLK
DATA
G.ENB
G.RST
V.BLK1
Q4809
R4836 100
R4840 10K
D4802
R4838 5.6K
H BLK0
Q4810
R4837 10K
R4839 3.3K
ASPECT(1:11)
H 4/12
V.BLK0
V.BLK2
R4872 100
R4854 10K
R4853 4.7K
R4857 5.6K
D4805
V.BLK1
Q4812
V.BLK2
Q4811
CLAMP
C4828 220p CH
R4850 4.7K
Q4813
R4848 10K
Q4815
R4856 10K
R4855 10K
R4852 10K
R4851 100
Q4814
R4846 100
D4804
4.7K
R4845
R4844 100
R4843 100
R4842 4.7K
R4841 100
R4849 10K
D4803
R4847 100


NC
1024fh
R4867
0
IC4804
TC74HCT74AF-TBB
-1/2
-2/2
R4870
F 68K
R4871
F 33K
32.2MHz
C4835
1.0
C4837
0.1
R4868
0
R4869
0
R4873
0
R4874
0
C4836
0.1
IC4803
TC74HC4040AF-TBB
Q12
Q6
Q5
Q7
Q4
Q3
Q2
GND
Vcc
Q11
Q10
Q8
Q9
CLR
CK
Q1
HRE
R4875
0
R4876
0
1024fh
F4804
ATF1189-A-T
+5V
IN
GND
R4825
1.0K
C4827
0.01
IC4802
HG62G010R29FB
EXTM
EXTS
EXTP2
EXTP1
V.BLK1
V.BLK2
R4827
1.0K
R4835
1.0K
R4833
1.0K
C4818
0.1
C4821
0.1
1024fh
C4817
100/6.3
C4816
0.1
C4810
0.1
V BLK0
CLAMP
CLK
DATA
G.ENB
RESET
1024fh
C4819
0.1
R4822
R4823
1.0K
1.0K
R4824
100
Q4807
R4819
100
R4820
100
C4822
1000p
R4821
4.7K

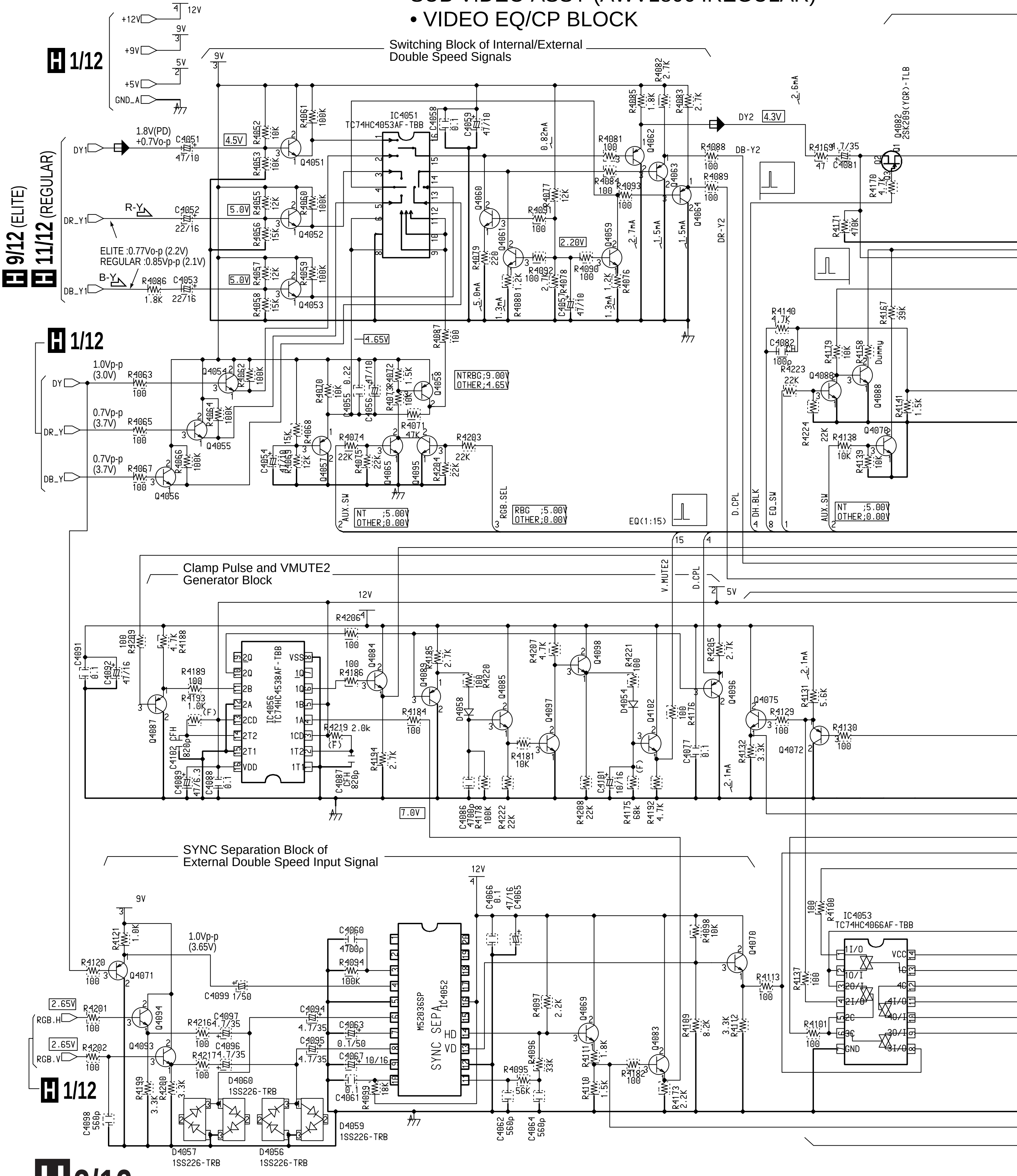
* Resistor indicated in ohm,1/16W±5% tolerance unless otherwise noted.k:k ohm,M:M ohm

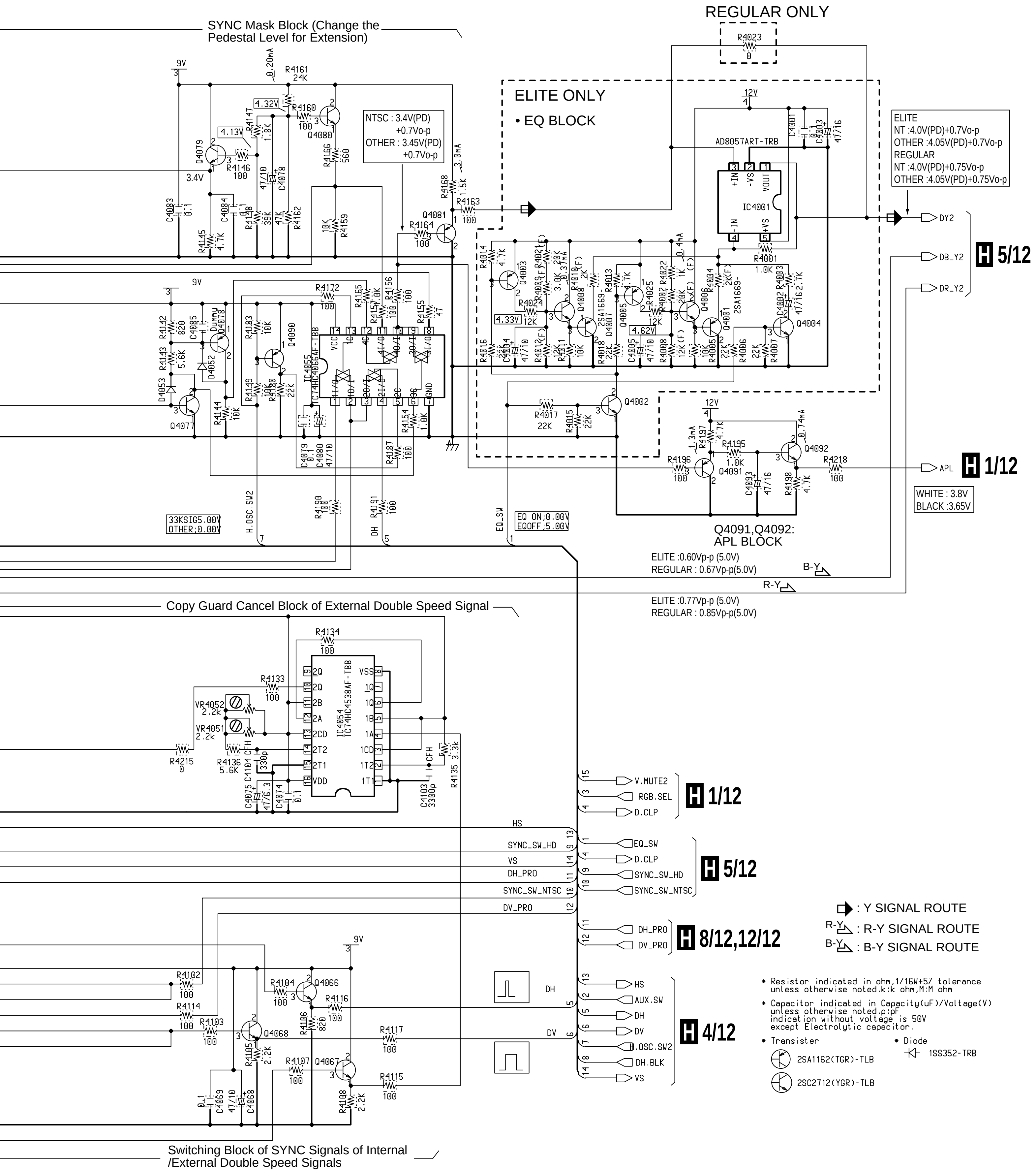
* Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 50V except Electrolytic capacitor.


1SS352-TRB
2SC2712(YGR)-TLB
2SA1162(YGR)-TLB

3.19 SUB VIDEO SERVICE and SUB VIDEO ASSYS (3/12)

H 3/12 SUB VIDEO SERVICE ASSY (AWV1819 :ELITE)
SUB VIDEO ASSY (AWV1806 :REGULAR)
• VIDEO EQ/CP BLOCK


1
2
3
4
A
B
C
D
H 1/12
+12V
+9V
+5V
GND_A
12V
9V
5V
Switching Block of Internal/External Double Speed Signals
IC4051
TC74HC4053AF-TBB
H 9/12 (ELITE)
H 11/12 (REGULAR)
DY1
DR_Y1
DB_Y1
1.8V(PD)
+0.7Vo-p
R-Y
B-Y
ELITE :0.77Vo-p (2.2V)
REGULAR :0.85Vp-p (2.1V)
C4051 47/10
C4052 22/16
C4053 22/16
R4086 1.8K
4.5V
5.0V
Q4051
Q4052
Q4053
DY2
4.3V
DB-Y2
DR-Y2
Q4082 2SK209(YGR)-TLB
2.6mA
0.82mA
2.20V
4.65V
NTRBG;9.00V
OTHER;4.65V
DY
DR_Y
DB_Y
1.0Vp-p (3.0V)
0.7Vp-p (3.7V)
Q4054
Q4055
Q4056
Q4057
Q4058
Q4065
Q4095
AUX.SW
NT ;5.00V
OTHER;0.00V
RGB.SEL
RBG ;5.00V
OTHER;0.00V
EQ(1:15)
D.CPL
DH.BLK
EQ_SW
Clamp Pulse and VMUTE2 Generator Block
V.MUTE2
IC4056
TC74HC4538AF-TBB
7.0V
Q4084
Q4085
Q4087
Q4089
Q4096
Q4097
Q4098
Q4102
Q4075
Q4072
SYNC Separation Block of External Double Speed Input Signal
IC4052
M52036SP
SYNC SEPA
HD
VD
1.0Vp-p (3.65V)
Q4071
Q4093
Q4094
Q4069
Q4070
Q4083
RGB.H
RGB.V
2.65V
H 1/12
D4056 1SS226-TRB
D4057 1SS226-TRB
D4059 1SS226-TRB
D4060 1SS226-TRB
IC4053
TC74HC4066AF-TBB
1I/O
1O/I
2O/I
2I/O
2C
3C
GND
VCC
1C
4C
4I/O
4O/I
3O/I
3I/O


REGULAR ONLY
R4023
0
ELITE ONLY
• EQ BLOCK
SYNC Mask Block (Change the Pedestal Level for Extension)
9V
0.20mA
R4161
24K
4.32V
R4160
100
Q4080
4.13V
R4147
1.8K
Q4079
R4146
100
3.4V
47/10
C4078
R4166
560
NTSC : 3.4V(PD)
+0.7Vo-p
OTHER : 3.45V(PD)
+0.7Vo-p
R4168
1.5K
3.0mA
R4163
100
Q4081
R4164
100
C4083
0.1
C4084
0.1
R4148
39K
47K
R4162
10K
R4159
R4145
4.7K
12V
C4001
0.1
C4003
47/16
AD8057ART-TRB
+IN
-VS
VOUT
IC4001
-IN
+VS
R4001
1.0K
ELITE
NT :4.0V(PD)+0.7Vo-p
OTHER :4.05V(PD)+0.7Vo-p
REGULAR
NT :4.0V(PD)+0.75Vo-p
OTHER :4.05V(PD)+0.75Vo-p
DY2
DB_Y2
DR_Y2
H 5/12
R4014
4.7K
Q4003
R4021 (F)
20K
0.37mA
R4009 (F)
3.0K
R4010 (F)
2K
R4013
4.7K
Q4005
R4025
12K
R4022
1K
R4002 20K
0.4mA
R4004 2K(F)
Q4006
Q4001
2SA1669-
R4003
2.7K
C4002
47/16
Q4004
R4024
12K
4.33V
Q4008
Q4007
4.62V
R4016
22K
C4004
47/10
R4012 (F)
12K
R4011
10K
R4018
22K
C4005
47/10
R4008
12K (F)
R4005
10K
R4006
22K
R4007
9V
R4172
100
R4165
1.0K
R4157
100
R4156
100
R4155
47
R4142
820
C4085
Dummy
Q4078
R4143
5.6K
D4052
D4053
Q4077
R4183
10K
Q4090
IC4055
TC74HC4066AF-TBB
VCC
1C
4C
4I/O
4O/I
3O/I
3I/O
1I/O
1O/I
2O/I
2I/O
2C
3C
GND
R4149
10K
R4180
10K
22K
R4144
10K
C4079
0.1
C4080
47/10
R4187
100
R4154
1.0K
R4017
22K
R4015
22K
Q4002
12V
1.3mA
R4197
4.7K
R4195
1.0K
0.74mA
Q4092
R4196
100
Q4091
C4093
47/16
R4198
4.7K
R4218
100
APL
H 1/12
WHITE : 3.8V
BLACK :3.65V
33KSIG5.00V
OTHER;0.00V
H.OSC.SW2
R4190
100
DH
R4191
100
EQ_SW
EQ ON;0.00V
EQOFF;5.00V
Q4091,Q4092:
APL BLOCK
ELITE :0.60Vp-p (5.0V)
REGULAR : 0.67Vp-p(5.0V)
B-Y
R-Y
ELITE :0.77Vp-p (5.0V)
REGULAR : 0.85Vp-p(5.0V)
Copy Guard Cancel Block of External Double Speed Signal
R4134
100
R4133
100
VR4052
2.2k
VR4051
2.2k
R4215
0
R4136
5.6K
C4104
330p
CFH
IC4054
TC74HC4538AF-TBB
2Q
2Q
2B
2A
2CD
2T2
2T1
VDD
VSS
1Q
1Q
1B
1A
1CD
1T2
1T1
C4075
47/6.3
C4074
0.1
C4103
3300p
R4135
3.3k
V.MUTE2
RGB.SEL
D.CLP
H 1/12
HS
SYNC_SW_HD
VS
DH_PRO
SYNC_SW_NTSC
DV_PRO
EQ_SW
D.CLP
SYNC_SW_HD
SYNC_SW_NTSC
H 5/12
DH_PRO
DV_PRO
H 8/12,12/12
9V
R4102
100
R4104
100
Q4066
R4116
100
R4114
100
R4103
100
Q4068
R4106
820
R4117
100
R4105
2.2K
R4107
100
Q4067
R4115
100
C4069
0.1
C4068
47/10
R4108
2.2K
DH
DV
HS
AUX.SW
DH
DV
H.OSC.SW2
DH.BLK
VS
H 4/12
Switching Block of SYNC Signals of Internal /External Double Speed Signals
A
B
C
D

- : Y SIGNAL ROUTE
- R-Y : R-Y SIGNAL ROUTE
- B-Y : B-Y SIGNAL ROUTE

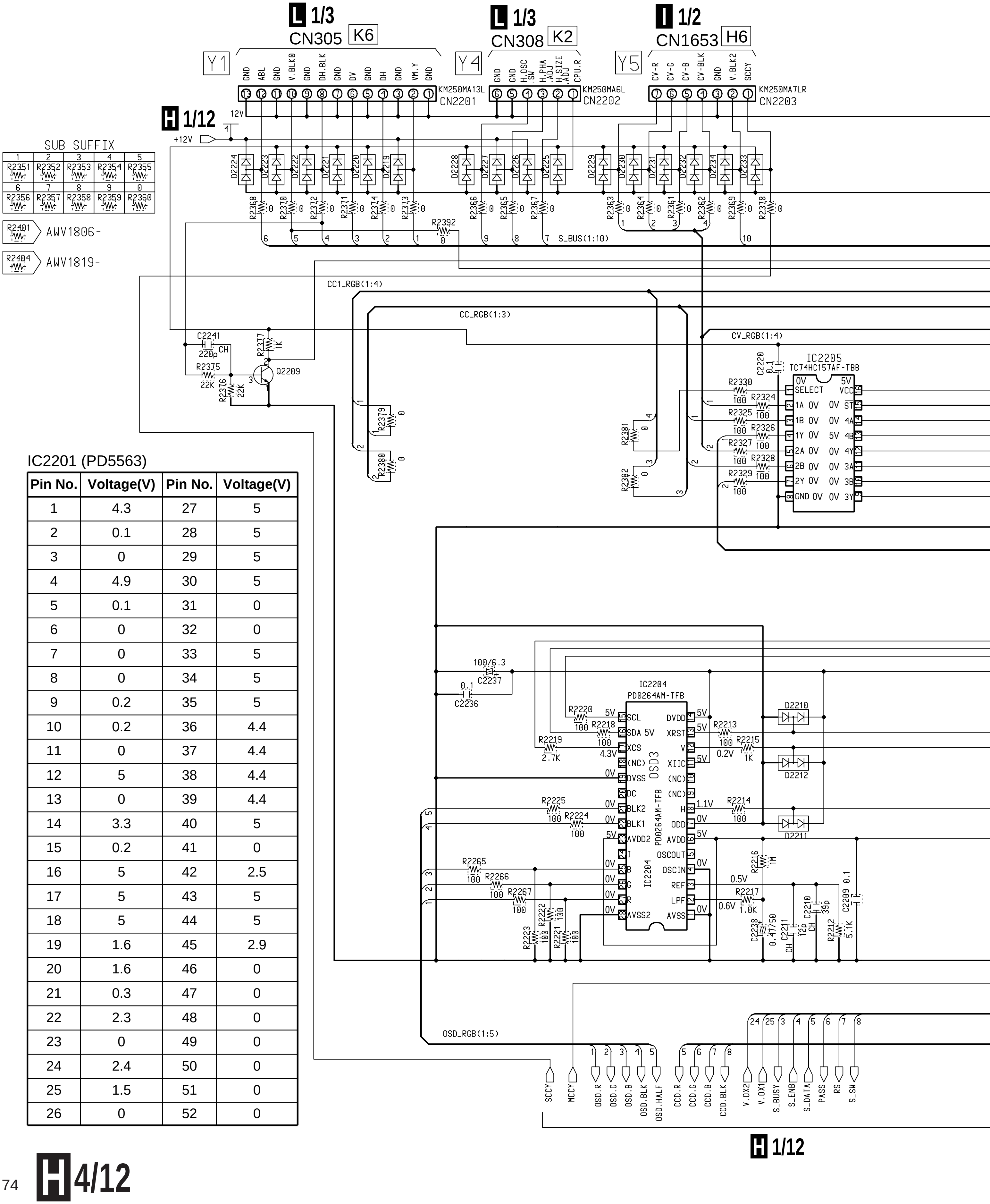
• Resistor indicated in ohm,1/16W±5% tolerance unless otherwise noted.k:k ohm,M:M ohm

• Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 50V except Electrolytic capacitor.

• Transister
2SA1162(TGR)-TLB
2SC2712(YGR)-TLB

• Diode
1SS352-TRB

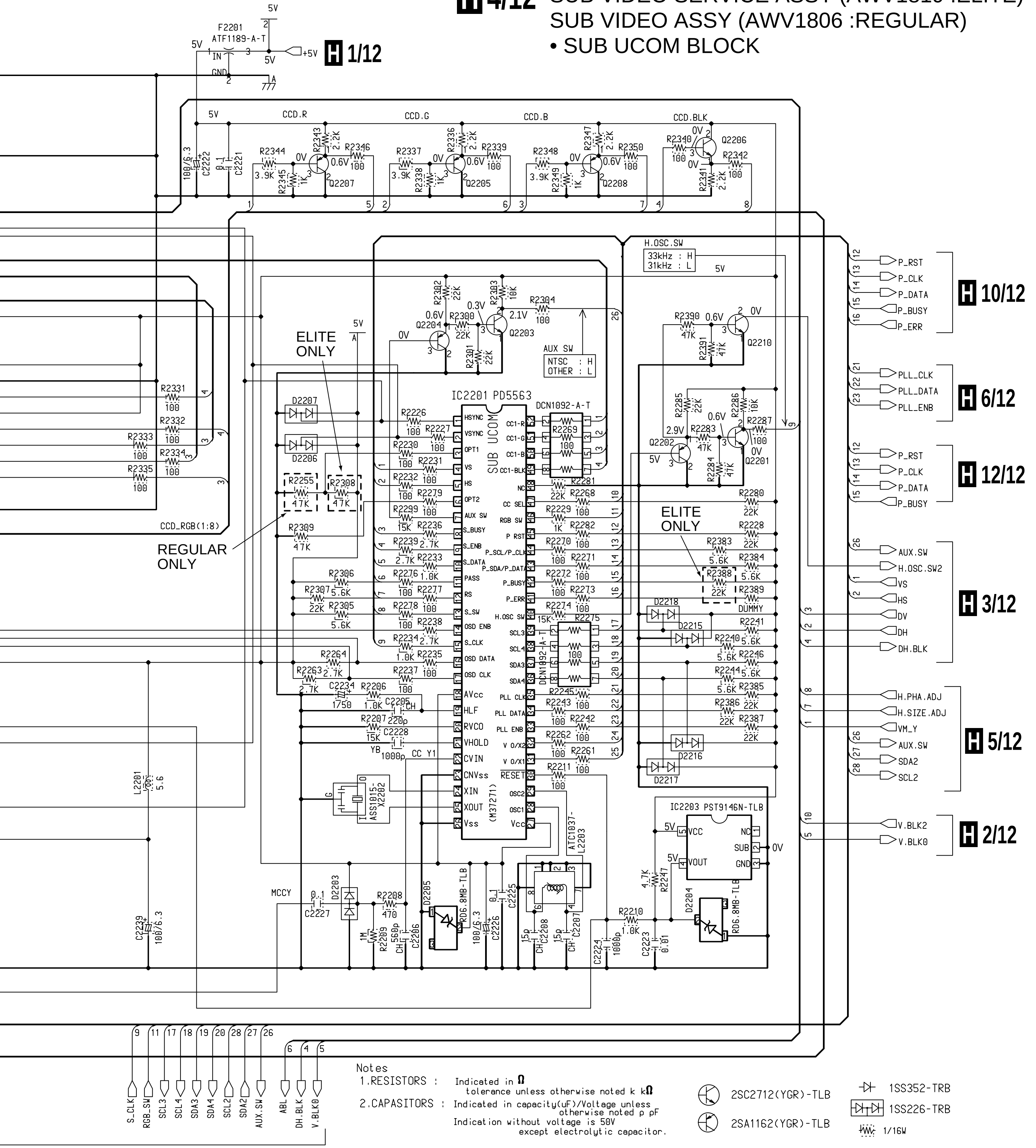
3.20 SUB VIDEO SERVICE and SUB VIDEO ASSYS (4/12)


L 1/3
CN305 K6
Y1
GND ABL GND V.BLK0 GND DH.BLK GND DV GND DH GND VM.Y GND
KM250MA13L
CN2201
L 1/3
CN308 K2
Y4
GND GND H.OSC .SW H.PHA ADJ H.SIZE ADJ CPU.R
KM250MA6L
CN2202
I 1/2
CN1653 H6
Y5
CV-R CV-G CV-B CV-BLK GND V.BLK2 SCCY
KM250MA7LR
CN2203
H 1/12
12V
+12V
SUB SUFFIX
R2351 R2352 R2353 R2354 R2355
R2356 R2357 R2358 R2359 R2360
R2401 AWV1806-
R2404 AWV1819-
D2224 D2223 D2222 D2221 D2220 D2219 D2218 D2228 D2227 D2226 D2225 D2229 D2230 D2231 D2232 D2234 D2233
R2368 R2370 R2372 R2371 R2374 R2373 R2366 R2365 R2367 R2363 R2364 R2361 R2362 R2369 R2378
R2392
S_BUS(1:10)
CC1_RGB(1:4)
CC_RGB(1:3)
CV_RGB(1:4)
C2241 220p CH
R2377 1K
R2375 22K
R2376 22K
Q2209
R2379 R2380 R2381 R2382
C2220 0.1
IC2205
TC74HC157AF-TBB
SELECT 1A 1B 1Y 2A 2B 2Y GND VCC ST 4A 4B 4Y 3A 3B 3Y
R2330 R2324 R2325 R2326 R2327 R2328 R2329
100/6.3
C2237
0.1 C2236
IC2204
PD0264AM-TFB
OSD3
SCL SDA XCS (NC) DVSS DC BLK2 BLK1 AVDD2 I B G R AVSS2
DVDD XRST V XIIC (NC) (NC) H ODD AVDD OSCOUT OSCIN REF LPF AVSS
R2220 R2218 R2219 2.7K R2225 R2224 R2265 R2266 R2267 R2222 R2223 R2221
R2213 R2215 1K R2214 R2216 1M R2217 1.0K R2212 5.1K
D2210 D2212 D2211
C2238 0.47/50 C2211 12p CH C2210 39p CH C2209 0.1
OSD_RGB(1:5)
SCCY MCCY OSD.R OSD.G OSD.B OSD.BLK OSD.HALF CCD.R CCD.G CCD.B CCD.BLK V.DX2 V.DX1 S_BUSY S_ENB S_DATA PASS RS S_SW
H 1/12
H 4/12

IC2201 (PD5563)

Pin No.	Voltage(V)	Pin No.	Voltage(V)
1	4.3	27	5
2	0.1	28	5
3	0	29	5
4	4.9	30	5
5	0.1	31	0
6	0	32	0
7	0	33	5
8	0	34	5
9	0.2	35	5
10	0.2	36	4.4
11	0	37	4.4
12	5	38	4.4
13	0	39	4.4
14	3.3	40	5
15	0.2	41	0
16	5	42	2.5
17	5	43	5
18	5	44	5
19	1.6	45	2.9
20	1.6	46	0
21	0.3	47	0
22	2.3	48	0
23	0	49	0
24	2.4	50	0
25	1.5	51	0
26	0	52	0

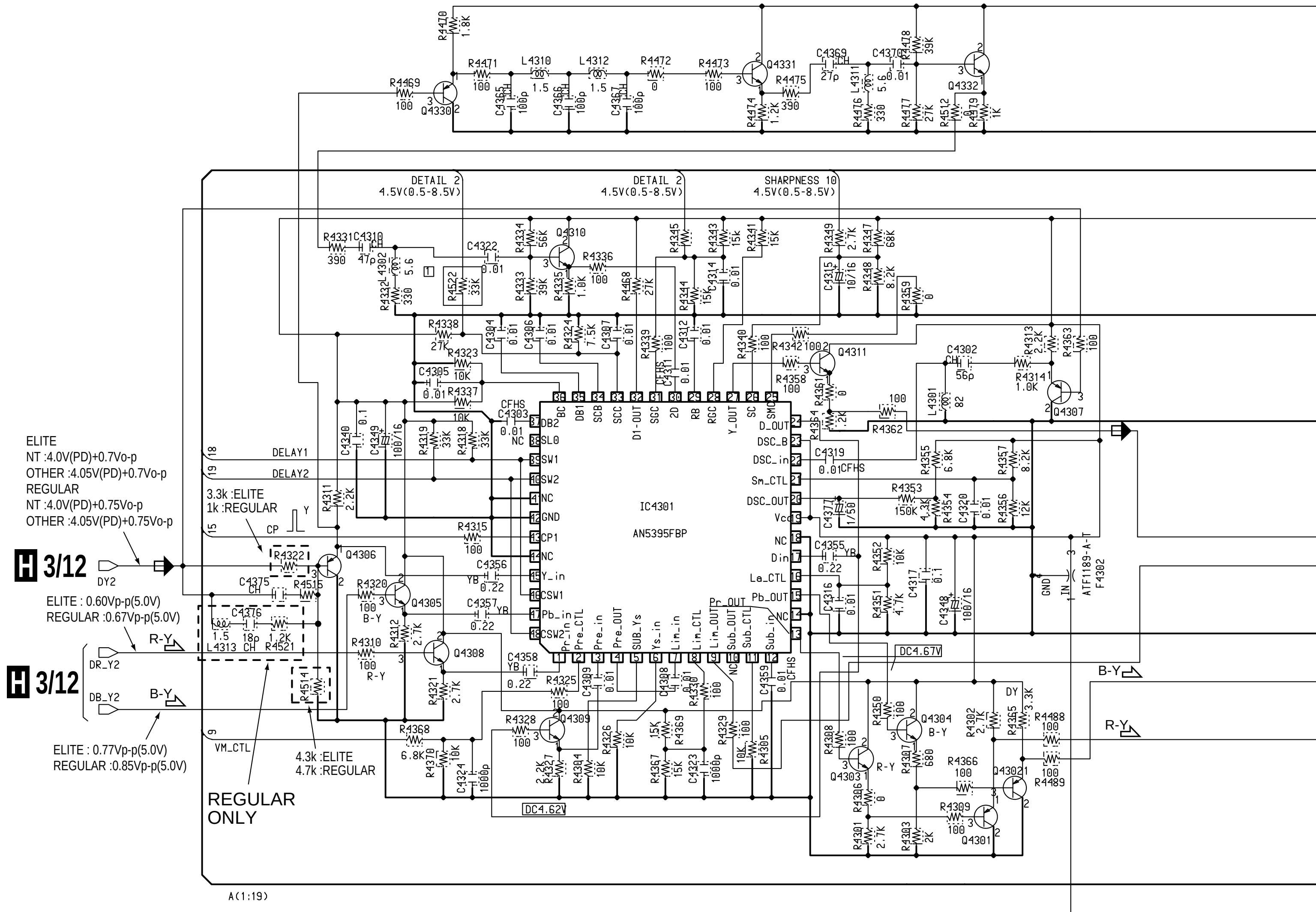
H 4/12 SUB VIDEO SERVICE ASSY (AWV1819 :ELITE)
SUB VIDEO ASSY (AWV1806 :REGULAR)
• SUB UCOM BLOCK


F2201
ATF1189-A-T
5V
IN
GND
+5V
H 1/12
CCD.R
CCD.G
CCD.B
CCD.BLK
C2222 100/6.3
C2221 0.1
R2344 3.9K
R2345 1K
R2343 2.2K
R2346 100
Q2207
R2337 3.9K
R2338 1K
R2336 2.2K
R2339 100
Q2205
R2348 3.9K
R2349 1K
R2347 2.2K
R2350 100
Q2208
R2340 100
Q2206
R2342 100
R2341 2.2K
0V
0.6V
H.OSC.SW
33kHz : H
31kHz : L
ELITE ONLY
REGULAR ONLY
R2302 22K
R2303 10K
R2304 100
R2300 22K
R2301 22K
Q2204
Q2203
0.3V
2.1V
AUX SW
NTSC : H
OTHER : L
R2390 47K
R2391 47K
Q2210
R2285 22K
R2286 10K
R2287 100
R2283 47K
R2284 47K
Q2202
Q2201
2.9V
IC2201 PD5563
SUB UCOM
(M37271)
DCN1092-A-T
HSYNC
VSYNC
OPT1
VS
HS
OPT2
AUX SW
S_BUSY
S_ENB
S_DATA
PASS
RS
S_SW
OSD ENB
S_CLK
OSD DATA
OSD CLK
AVcc
HLF
RVCO
VHOLD
CVIN
CNVss
XIN
XOUT
Vss
CC1-R
CC1-G
CC1-B
CC1-BLK
NC
CC SEL
RGB SW
P RST
P_SCL/P_CLK
P_SDA/P_DATA
P_BUSY
P_ERR
H.OSC SW
SCL3
SCL4
SDA3
SDA4
PLL CLK
PLL DATA
PLL ENB
V 0/X2
V 0/X1
RESET
OSC2
OSC1
Vcc
D2207
D2206
R2255 47K
R2308 47K
R2309 47K
R2331 100
R2332 100
R2333 100
R2334 100
R2335 100
CCD_RGB(1:8)
R2226 100
R2227 100
R2230 100
R2231 100
R2232 100
R2279 100
R2299 15K
R2236 100
R2239 2.7K
R2233 1.0K
R2276 100
R2277 100
R2278 100
R2238 100
R2234 1.0K
R2235 100
R2237 100
R2306 5.6K
R2307 22K
R2305 5.6K
R2264 2.7K
R2263 2.7K
C2234 1750
R2206 1.0K
C2205 CH
R2207 15K
220p
C2228
1000p
YB
CC Y1
X2202 ASS1015-
R2269 100
R2281 22K
R2268 100
R2229 1K
R2282 100
R2270 100
R2271 100
R2272 100
R2273 100
R2274 15K
R2275 100
R2245 100
R2243 100
R2242 100
R2262 100
R2261 100
R2211 100
R2280 22K
R2228 22K
R2383 5.6K
R2384 5.6K
R2388 22K
R2389 DUMMY
D2218
D2215
R2241 5.6K
R2240 5.6K
R2246 5.6K
R2244 5.6K
R2385 22K
R2386 22K
R2387 22K
D2216
D2217
IC2203 PST9146N-TLB
VCC
NC
SUB
GND
VOUT
R2247 4.7K
D2204 RD6.8MB-TLB
R2210 1.0K
C2223 0.01
C2224 1000p
L2203 ATC1037-
C2207 15p CH
C2208 15p CH
C2225 0.1
C2226 100/6.3
D2205 RD6.8MB-TLB
C2206 560p CH
R2209 1M
R2208 470
D2203
C2227 0.1
MCCY
L2201 5.6
C2229 100/6.3
P_RST
P_CLK
P_DATA
P_BUSY
P_ERR
H 10/12
PLL_CLK
PLL_DATA
PLL_ENB
H 6/12
H 12/12
AUX.SW
H.OSC.SW2
VS
HS
DV
DH
DH.BLK
H 3/12
H.PHA.ADJ
H.SIZE.ADJ
VM_Y
SDA2
SCL2
H 5/12
V.BLK2
V.BLK0
H 2/12
S_CLK
RGB.SW
SCL3
SCL4
SDA3
SDA4
SCL2
SDA2
AUX.SW
ABL
DH.BLK
V.BLK0

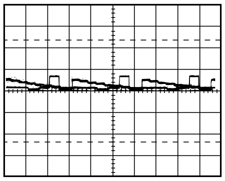
Notes
1.RESISTORS : Indicated in Ω
tolerance unless otherwise noted k kΩ
2.CAPASITORS : Indicated in capacity(uF)/Voltage unless otherwise noted p pF
Indication without voltage is 50V
except electrolytic capacitor.

2SC2712(YGR)-TLB
2SA1162(YGR)-TLB
1SS352-TRB
1SS226-TRB
1/16W

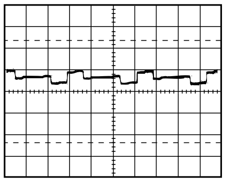
3.21 SUB VIDEO SERVICE and SUB VIDEO ASSYS (5/12)


ELITE
NT :4.0V(PD)+0.7Vo-p
OTHER :4.05V(PD)+0.7Vo-p
REGULAR
NT :4.0V(PD)+0.75Vo-p
OTHER :4.05V(PD)+0.75Vo-p
H 3/12
DY2
ELITE : 0.60Vp-p(5.0V)
REGULAR :0.67Vp-p(5.0V)
R-Y
H 3/12
DR_Y2
B-Y
DB_Y2
ELITE : 0.77Vp-p(5.0V)
REGULAR :0.85Vp-p(5.0V)
3.3k :ELITE
1k :REGULAR
4.3k :ELITE
4.7k :REGULAR
REGULAR ONLY
DELAY1
DELAY2
VM_CTL
CP
Y
DETAIL 2
4.5V(0.5-8.5V)
DETAIL 2
4.5V(0.5-8.5V)
SHARPNESS 10
4.5V(0.5-8.5V)
IC4301
AN5395FBP
DC4.67V
DC4.62V
ATF1189-A-T
F4302
B-Y
R-Y
DY
Q4330
Q4331
Q4332
Q4310
Q4311
Q4307
Q4306
Q4305
Q4308
Q4309
Q4304
Q4303
Q4302
Q4301
A(1:19)

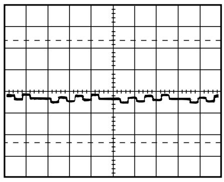
47 **K4301 (YD)**
V: 1V/div. H: 10µsec/div.



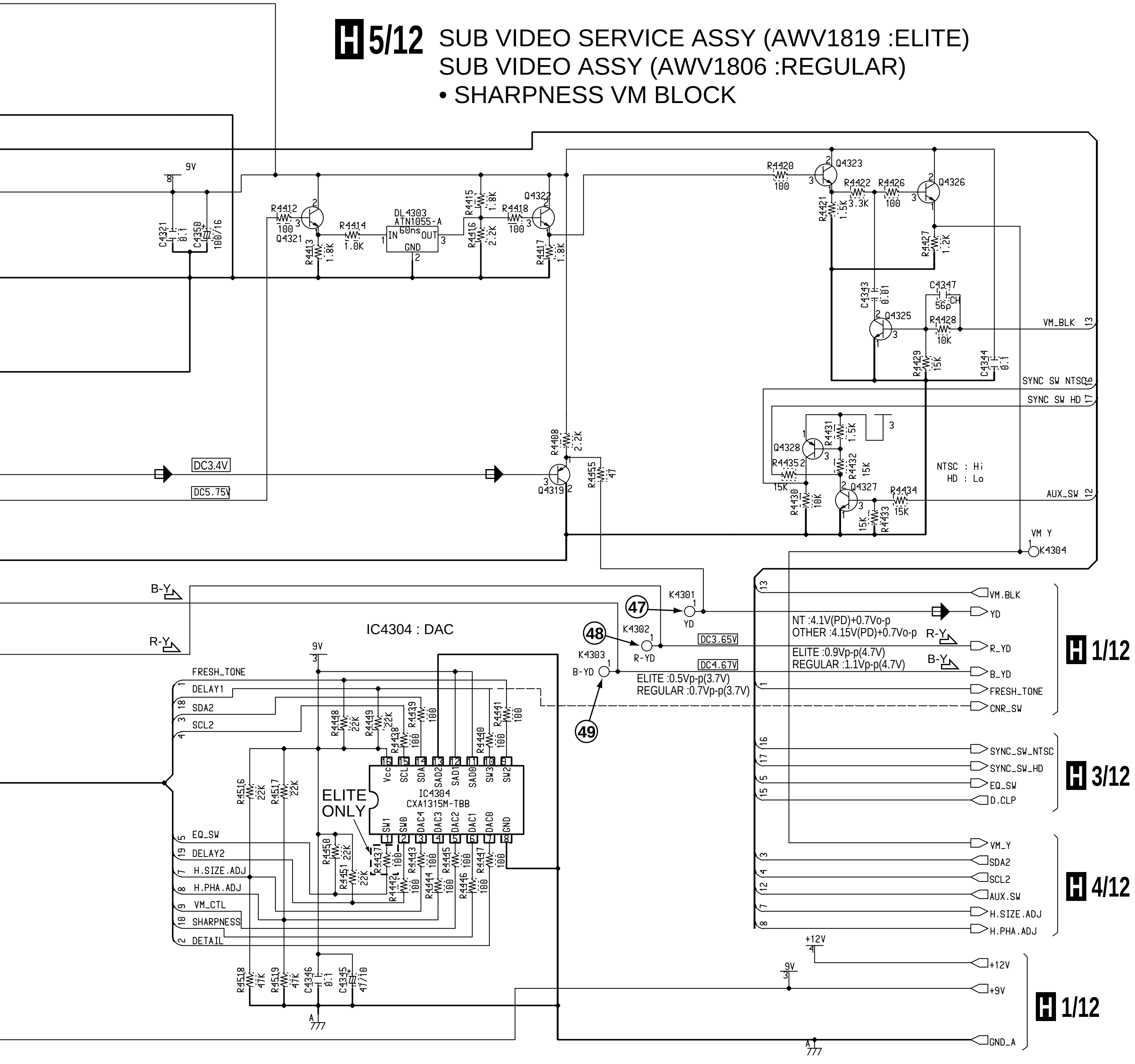
48 **K4302 (R-YD)**
V: 1V/div. H: 10µsec/div.



49 **K4303 (B-YD)**
V: 1V/div. H: 10µsec/div.



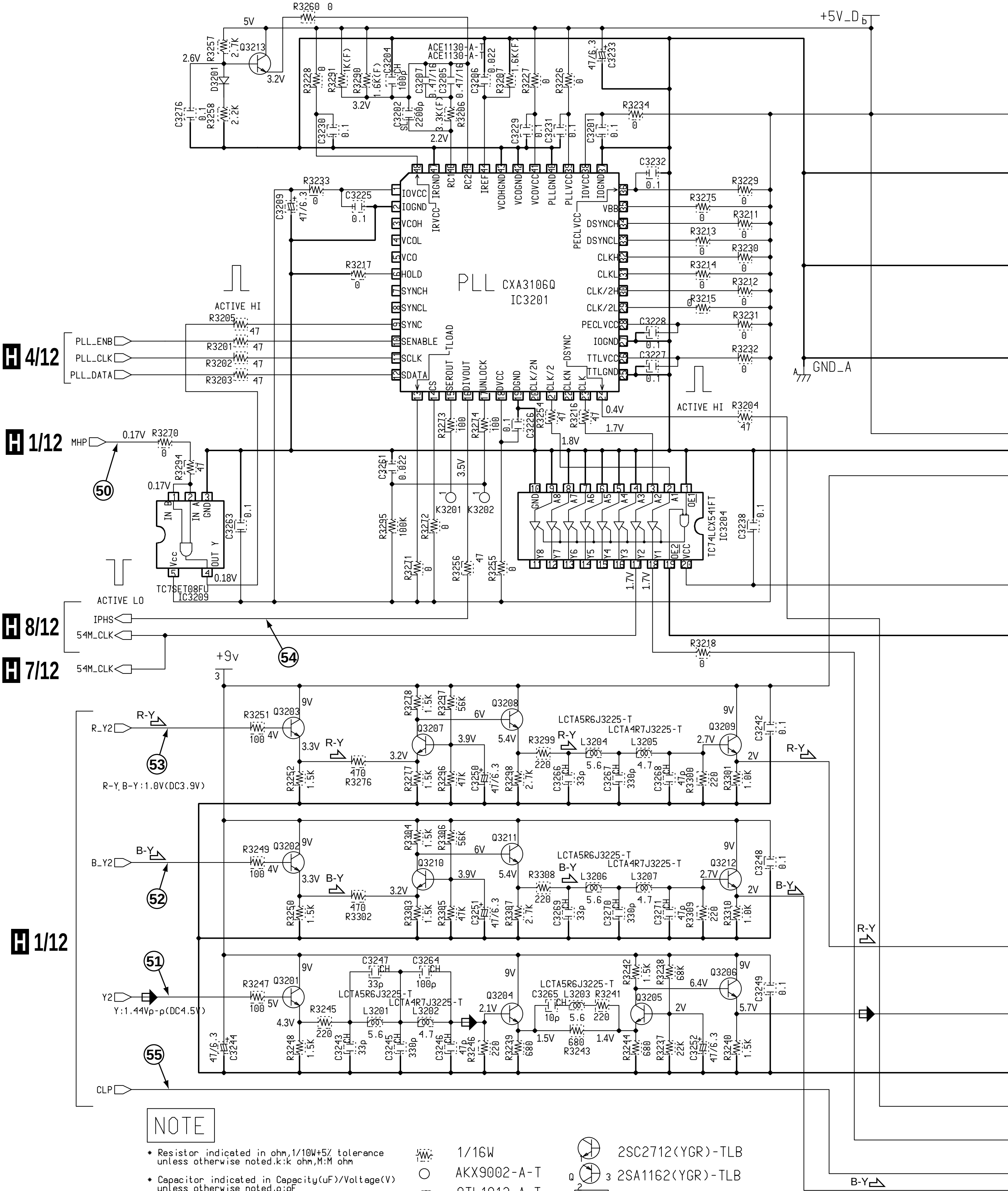
H 5/12 SUB VIDEO SERVICE ASSY (AWV1819 :ELITE)
SUB VIDEO ASSY (AWV1806 :REGULAR)
• SHARPNESS VM BLOCK


9V
C4321 0.1
C4350 100/16
R4412 100
Q4321
R4413 1.8K
R4414 1.0K
DL4303 ATN1055-A 60ns
IN OUT GND
R4415 1.8K
R4416 2.2K
R4418 100
Q4322
R4417 1.8K
R4420 100
Q4323
R4421 1.5K
R4422 3.3K
R4426 100
Q4326
R4427 1.2K
C4343 0.01
C4347 56p CH
Q4325
R4428 10K
R4429 15K
C4344 0.1
VM_BLK 13
SYNC SW NTSC 16
SYNC SW HD 17
Q4328
R4431 1.5K
R4435 15K
R4432 15K
NTSC : Hi
HD : Lo
R4430 10K
Q4327
R4434 15K
R4433 15K
AUX_SW 12
VM Y
K4304
DC3.4V
DC5.75V
R4408 2.2K
Q4319
R4455 47
B-Y
R-Y
IC4304 : DAC
47
K4301
YD
48
K4302
R-YD
K4303
B-YD
49
DC3.65V
DC4.67V
NT :4.1V(PD)+0.7Vo-p
OTHER :4.15V(PD)+0.7Vo-p
ELITE :0.9Vp-p(4.7V)
REGULAR :1.1Vp-p(4.7V)
ELITE :0.5Vp-p(3.7V)
REGULAR :0.7Vp-p(3.7V)
FRESH_TONE
DELAY1
SDA2
SCL2
R4448 22K
R4449 22K
R4438 100
R4439 100
R4440 100
R4441 100
R4516 22K
R4517 22K
ELITE ONLY
IC4304 CXA1315M-TBB
Vcc SCL SDA SAD2 SAD1 SAD0 SW3 SW2
SW1 SW0 DAC4 DAC3 DAC2 DAC1 DAC0 GND
R4450 22K
R4451 22K
R4437 100
R4442 100
R4443 100
R4444 100
R4445 100
R4446 100
R4447 100
EQ_SW
DELAY2
H.SIZE.ADJ
H.PHA.ADJ
VM_CTL
SHARPNESS
DETAIL
R4518 47K
R4519 47K
C4346 0.1
C4345 47/10
VM.BLK
YD
R_YD
B_YD
FRESH_TONE
CNR_SW
H 1/12
SYNC_SW_NTSC
SYNC_SW_HD
EQ_SW
D.CLP
H 3/12
VM_Y
SDA2
SCL2
AUX.SW
H.SIZE.ADJ
H.PHA.ADJ
H 4/12
+12V
9V
+12V
+9V
GND_A
H 1/12

- Resistor indicated in ohm,1/16W±5% tolerance unless otherwise noted.k:k ohm,M:M ohm
- Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 50V except Electrolytic capacitor.
- Transistor
  - 2SA1162(TGR)-TLB
  - 2SC2712(YGR)-TLB
- Diode
  - 1SS352-TRB

: Y SIGNAL ROUTE
R-Y : R-Y SIGNAL ROUTE
B-Y : B-Y SIGNAL ROUTE

3.22 SUB VIDEO SERVICE ASSY (6/12) (ELITE ONLY)


A
B
C
D
+5V_D
5V
R3260 0
Q3213
R3257 2.7K
2.6V
3.2V
D3201
R3258 2.2K
C3276 0.1
R3228 0
R3291 1K(F)
R3290 1.6K(F)
C3204 CH 100p
C3202 SL 2200p
3.2V
ACE1130-A-T
C3207 0.47/16
C3205 0.47/16
R3206 3.3K(F)
2.2V
C3206 0.022
R3207 1.6K(F)
R3227 0
R3226 0
C3233 47/6.3
C3230 0.1
C3229 0.1
C3231 0.1
C3201 0.1
R3234 0
C3232 0.1
R3233 0
C3209 47/6.3
C3225 0.1
R3217 0
PLL CXA3106Q IC3201
IOVCC IOGND VCOH VCOL VCO HOLD SYNCH SYNCL SYNC SENABLE SCLK SDATA
IRGND RC1 RC2 IREF VCOHGND VCOGND VCOVCC PLLGND PLLVCC IOVCC IOGND IRVCC
VBB DSYNCH DSYNCL CLKH CLKL CLK/2H CLK/2L PECLVCC IOGND TTLVCC TTLGND PECLVCC
CS SEROUT TLOAD DIVOUT UNLOCK DVCC DGND CLK/2N CLK/2 CLKN CLK DSYNC
R3229 0
R3275 0
R3211 0
R3213 0
R3230 0
R3214 0
R3212 0
R3215 0
R3231 0
C3228 0.1
R3232 0
C3227 0.1
GND_A
ACTIVE HI
R3204 47
0.4V
1.7V
1.8V
R3254 47
R3216 47
C3226 0.1
R3273 100
R3274 100
ACTIVE HI
R3205 47
R3201 47
R3202 47
R3203 47
H 4/12
PLL_ENB
PLL_CLK
PLL_DATA
H 1/12
MHP
0.17V
R3270 0
R3294 47
(50)
0.17V
IN B IN A GND Vcc OUT Y
TC7SET08FU IC3209
0.18V
C3263 0.1
C3261 0.022
3.5V
K3201 K3202
R3295 100K
R3272 0
R3271 0
R3256 47
R3255 0
GND A8 A7 A6 A5 A4 A3 A2 A1 OE1
Y8 Y7 Y6 Y5 Y4 Y3 Y2 Y1 OE2 VCC
TC74LCX541FT IC3204
C3238 0.1
1.7V
1.7V
ACTIVE LO
H 8/12
IPHS
54M_CLK
(54)
H 7/12
54M_CLK
R3218 0
+9V
R-Y
R_Y2
R3251 100
Q3203
9V
4V
3.3V
(53)
R-Y,B-Y:1.0V(DC3.9V)
R3252 1.5K
R-Y
R3276 470
3.2V
R3278 1.5K
R3297 56K
Q3207
3.9V
6V
Q3208
5.4V
R3277 1.5K
R3296 47K
C3250 47/6.3
R3298 2.7K
R3299 220
R-Y
LCTA5R6J3225-T
LCTA4R7J3225-T
L3204 5.6
L3205 4.7
C3266 CH 33p
C3267 CH 330p
C3268 CH 47p
R3300 220
2.7V
Q3209
9V
2V
R3301 1.0K
C3242 0.1
R-Y
B-Y
B_Y2
R3249 100
Q3202
9V
4V
3.3V
(52)
R3250 1.5K
B-Y
R3302 470
3.2V
R3304 1.5K
R3306 56K
Q3210
6V
Q3211
3.9V
5.4V
R3303 1.5K
R3305 47K
C3251 47/6.3
R3307 2.7K
R3308 220
B-Y
LCTA5R6J3225-T
LCTA4R7J3225-T
L3206 5.6
L3207 4.7
C3269 CH 33p
C3270 CH 330p
C3271 CH 47p
R3309 220
2.7V
Q3212
9V
2V
R3310 1.0K
C3248 0.1
B-Y
R-Y
H 1/12
(51)
Y2
Y:1.44Vp-p(DC4.5V)
R3247 100
Q3201
9V
5V
4.3V
C3247 CH 33p
C3264 CH 100p
LCTA5R6J3225-T
LCTA4R7J3225-T
R3245 220
L3201 5.6
L3202 4.7
Q3204
9V
2.1V
C3265 CH 10p
L3203 5.6
R3241 220
R3243 680
1.5V
1.4V
R3242 1.5K
R3238 68K
6.4V
Q3205
2V
Q3206
9V
5.7V
C3249 0.1
C3244 47/6.3
R3248 1.5K
C3243 CH 33p
C3245 CH 330p
C3246 CH 47p
R3246 220
R3239 680
R3244 680
R3237 22K
C3252 47/6.3
R3240 1.5K
(55)
CLP
B-Y

NOTE

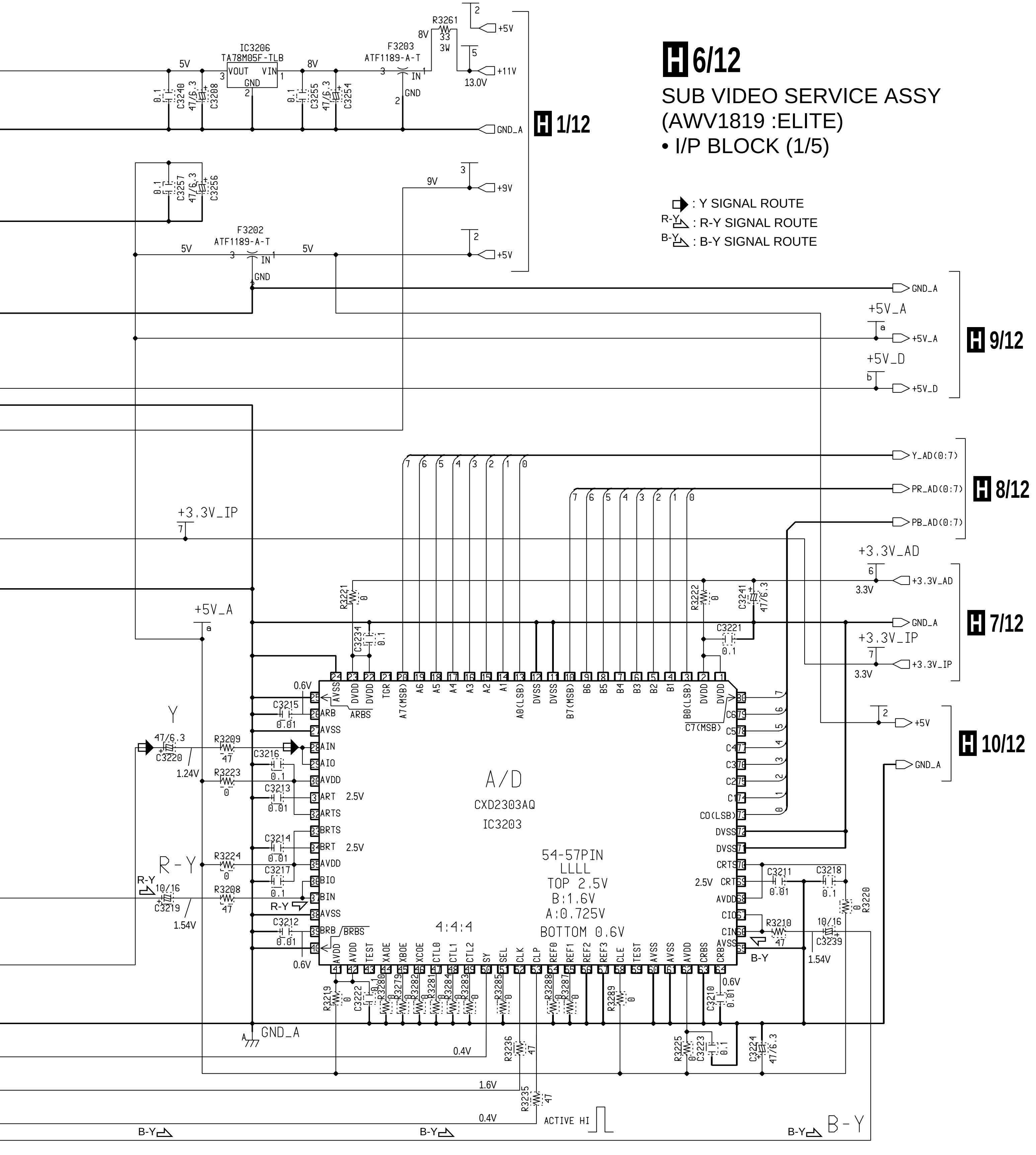
- Resistor indicated in ohm,1/10W+5% tolerance unless otherwise noted.k:k ohm,M:M ohm
- Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 50V except Electrolytic capacitor.

1/16W
AKX9002-A-T
QTL1013-A-T
2SC2712(YGR)-TLB
2SA1162(YGR)-TLB
1SS226-TRB
1SS352-TRB

H 6/12

SUB VIDEO SERVICE ASSY
(AWV1819 :ELITE)
• I/P BLOCK (1/5)

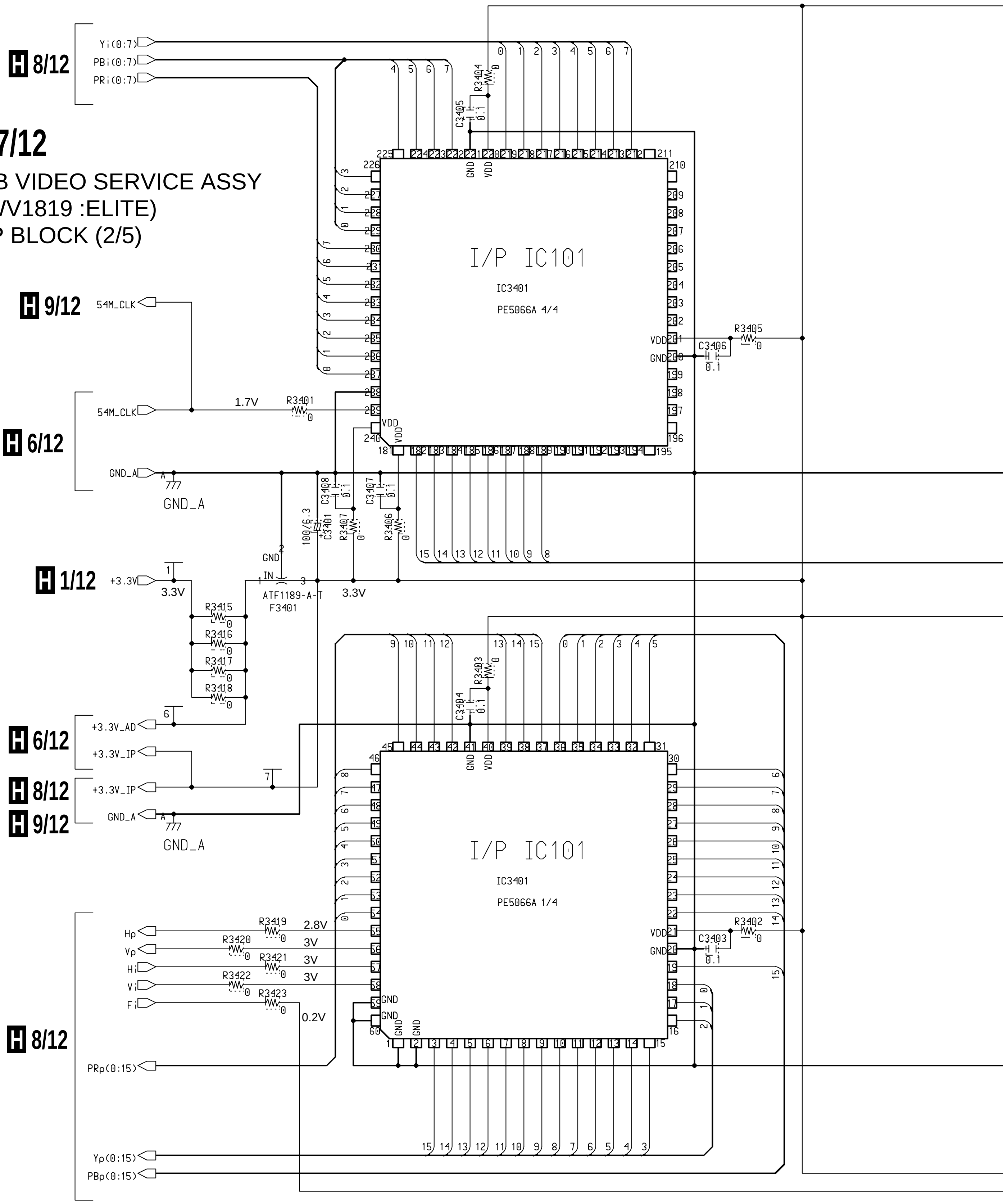
➡ : Y SIGNAL ROUTE
R-Y ⇨ : R-Y SIGNAL ROUTE
B-Y ⇨ : B-Y SIGNAL ROUTE


IC3206
TA78M05F-TLB
VOUT VIN
GND
5V
8V
C3240 0.1
C3208 47/6.3
C3255 0.1
C3254 47/6.3
F3203
ATF1189-A-T
IN
GND
R3261 33 3W
8V
+5V
+11V
13.0V
GND_A
H 1/12
C3257 0.1
C3256 47/6.3
9V
+9V
F3202
ATF1189-A-T
5V
+5V
GND_A
+5V_A
+5V_D
H 9/12
Y_AD(0:7)
PR_AD(0:7)
PB_AD(0:7)
H 8/12
+3.3V_AD
3.3V
+3.3V_IP
H 7/12
+5V
H 10/12
+3.3V_IP
+5V_A
R3221 0
C3234 0.1
R3222 0
C3241 47/6.3
C3221 0.1
0.6V
C3215 0.01
ARBS
Y
47/6.3
C3220
R3209 47
1.24V
C3216 0.1
R3223 0
C3213 0.01
2.5V
C3214 0.01
2.5V
R-Y
R3224 0
C3217 0.1
R3208 47
10/16
C3219
1.54V
R-Y
C3212 0.01
BRBS
0.6V
A/D
CXD2303AQ
IC3203
54-57PIN
LLLL
TOP 2.5V
B:1.6V
A:0.725V
BOTTOM 0.6V
4:4:4
AVSS DVDD DVDD TGR A7(MSB) A6 A5 A4 A3 A2 A1 A0(LSB) DVSS DVSS B7(MSB) B6 B5 B4 B3 B2 B1 B0(LSB) DVDD DVDD
AVSS ARB AVSS AIN AIO AVDD ART ARTS BRTS BRT AVDD BIO BIN AVSS BRB AVDD
C7(MSB) C6 C5 C4 C3 C2 C1 C0(LSB) DVSS DVSS CRTS CRT AVDD CIO CIN AVSS
AVDD AVDD TEST XADE XBOE XCOE CTL0 CTL1 CTL2 SY SEL CLK CLP REF0 REF1 REF2 REF3 CLE TEST AVSS AVSS AVDD CRBS CRB
2.5V
C3211 0.01
C3218 0.1
R3220 0
R3210 47
10/16
C3239
1.54V
B-Y
0.6V
R3219 0
C3222 0.1
R3280 R3279 R3282 R3281 R3284 R3283 R3285 R3288 R3287 R3289 0
C3210 0.01
GND_A
0.4V
R3236 47
R3225 0
C3223 0.1
C3224 47/6.3
1.6V
R3235 47
0.4V
ACTIVE HI
B-Y
B-Y
B-Y
B-Y

3.23 SUB VIDEO SERVICE ASSY (7/12) (ELITE ONLY)

H 7/12

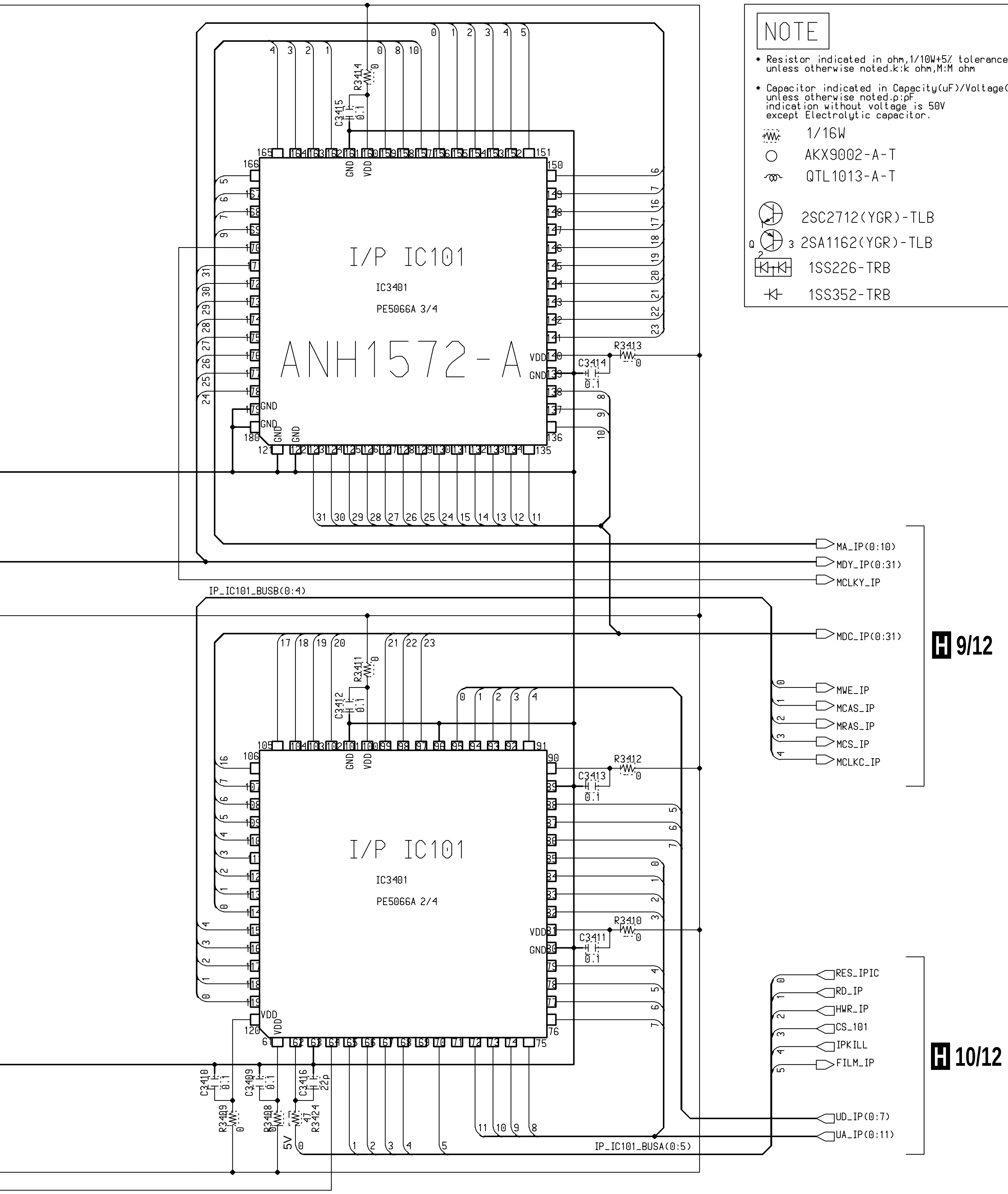
SUB VIDEO SERVICE ASSY
(AWV1819 :ELITE)
- I/P BLOCK (2/5)


H 8/12
Yi(0:7)
PBi(0:7)
PRi(0:7)
H 9/12
54M_CLK
H 6/12
54M_CLK
GND_A
GND_A
H 1/12
+3.3V
3.3V
1.7V
R3401
0
R3404
C3405
0.1
R3405
C3406
C3408
C3407
C3401
100/6.3
R3407
R3406
ATF1189-A-T
F3401
IN
GND
3.3V
R3415
R3416
R3417
R3418
H 6/12
+3.3V_AD
+3.3V_IP
H 8/12
+3.3V_IP
H 9/12
GND_A
GND_A
I/P IC101
IC3401
PE5066A 4/4
VDD
GND
I/P IC101
IC3401
PE5066A 1/4
R3403
C3404
R3402
C3403
H 8/12
Hp
Vp
Hi
Vi
Fi
R3419
R3420
R3421
R3422
R3423
2.8V
3V
3V
3V
0.2V
PRp(0:15)
Yp(0:15)
PBp(0:15)

NOTE

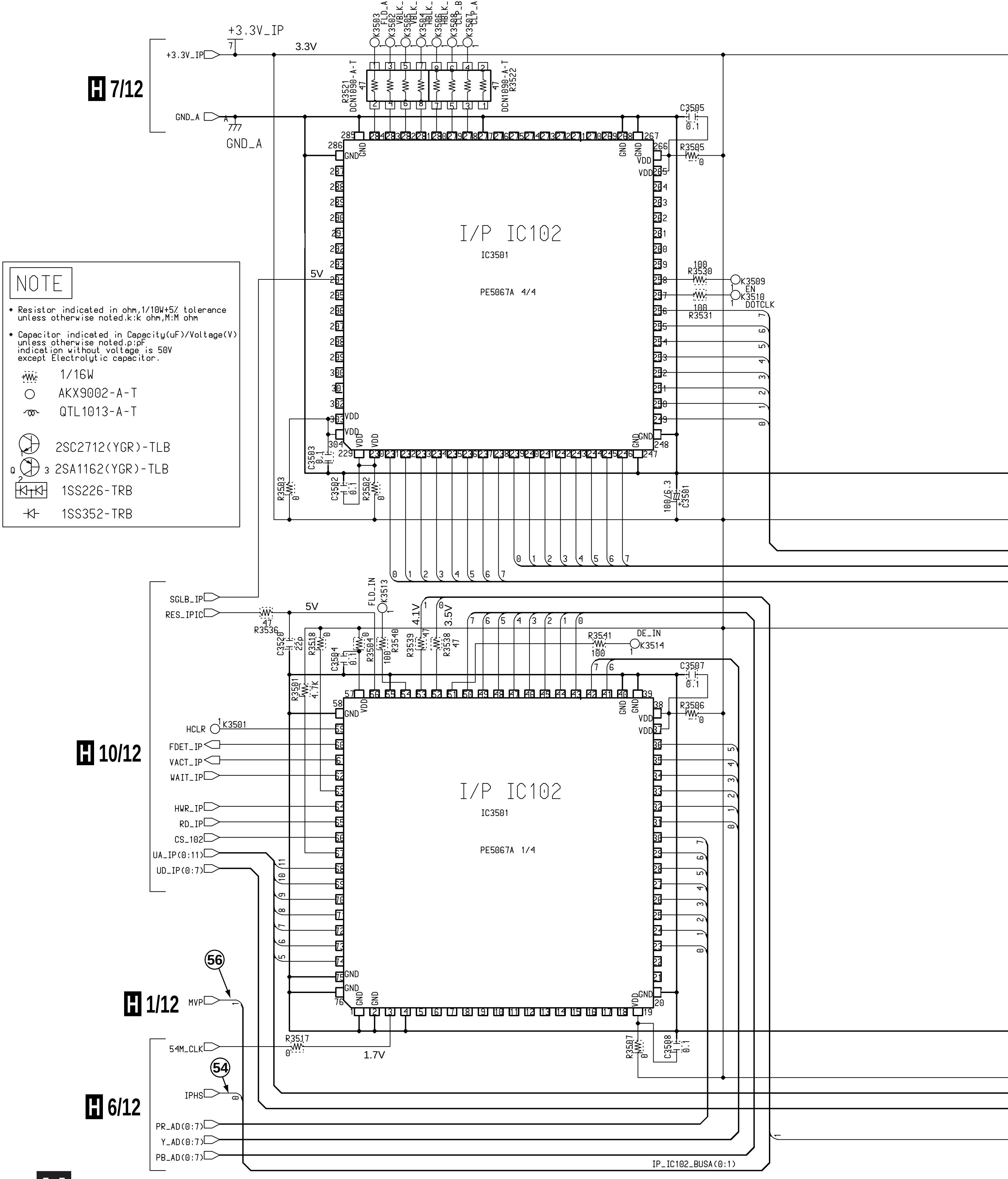
- Resistor indicated in ohm,1/10W±5% tolerance unless otherwise noted.k:k ohm,M:M ohm
- Capacitor indicated in Capecity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 50V except Electrolytic capacitor.

⩘	1/16W
○	AKX9002-A-T
∽	QTL1013-A-T
	2SC2712(YGR)-TLB
Q 2 3	2SA1162(YGR)-TLB
	1SS226-TRB
	1SS352-TRB


I/P IC101
IC3401
PE5066A 3/4
ANH1572-A
I/P IC101
IC3401
PE5066A 2/4
R3414 0
C3415 0.1
R3413 0
C3414 0.1
R3411 0
C3412 0.1
R3412 0
C3413 0.1
R3410 0
C3411 0.1
C3410 0.1
C3409 0.1
C3416 22p
R3409 0
R3408 0
R3424 47
5V
GND
VDD
IP_IC101_BUSB(0:4)
IP_IC101_BUSA(0:5)
MA_IP(0:10)
MDY_IP(0:31)
MCLKY_IP
MDC_IP(0:31)
MWE_IP
MCAS_IP
MRAS_IP
MCS_IP
MCLKC_IP
H 9/12
RES_IPIC
RD_IP
HWR_IP
CS_101
IPKILL
FILM_IP
H 10/12
UD_IP(0:7)
UA_IP(0:11)

A
B
C
D

3.24 SUB VIDEO SERVICE ASSY (8/12) (ELITE ONLY)


A
B
C
D
H 7/12
+3.3V_IP
3.3V
GND_A
K3503 FLD_A
K3502 VBLK_B
K3505 VBLK_A
K3504 HBLK_B
K3506 HBLK_A
K3508 CLP_B
K3507 CLP_A
R3521 DCN1090-A-T 47
R3522 DCN1090-A-T 47
C3505 0.1
R3505 0
I/P IC102
IC3501
PE5067A 4/4
5V
R3530 100
K3509 EN
R3531 100
K3510 DOTCLK
C3503 0.1
R3503 0
C3502 0.1
R3502 0
C3501 100/6.3
GND
VDD
H 10/12
SGLB_IP
RES_IPIC
R3536 47
C3520 22p
R3518 0
C3504 0.1
R3504 0
R3540 100
R3539 47
R3538 47
FLD_IN
K3513
4.1V
3.5V
R3541 100
DE_IN
K3514
C3507 0.1
R3506 0
R3501 4.7K
HCLR
K3501
FDET_IP
VACT_IP
WAIT_IP
HWR_IP
RD_IP
CS_102
UA_IP(0:11)
UD_IP(0:7)
I/P IC102
IC3501
PE5067A 1/4
56
H 1/12
MVP
54M_CLK
R3517 0
1.7V
R3507 0
C3508 0.1
54
H 6/12
IPHS
PR_AD(0:7)
Y_AD(0:7)
PB_AD(0:7)
IP_IC102_BUSA(0:1)

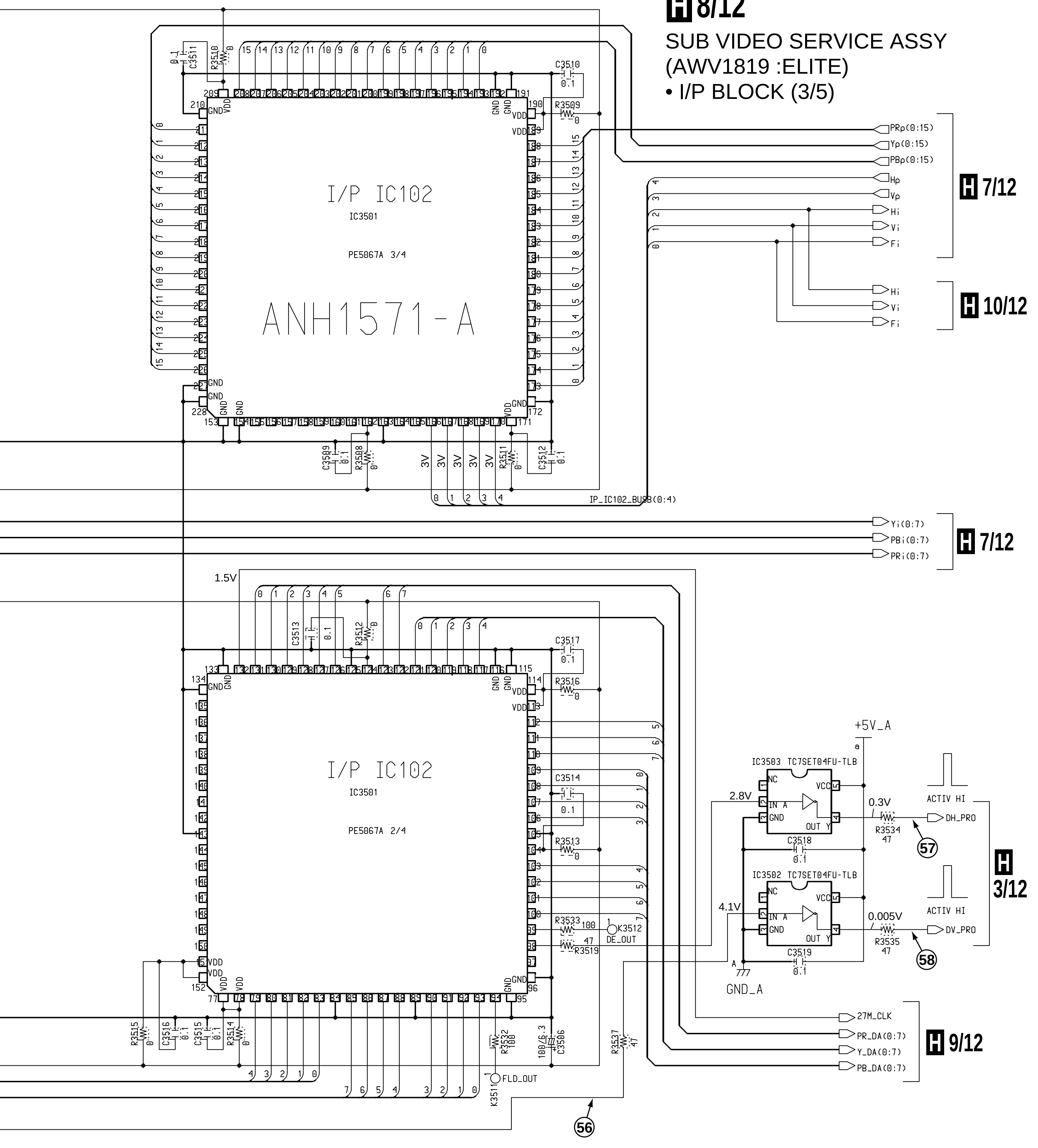
NOTE

- Resistor indicated in ohm,1/10W+5% tolerance unless otherwise noted.k:k ohm,M:M ohm
- Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 50V except Electrolytic capacitor.

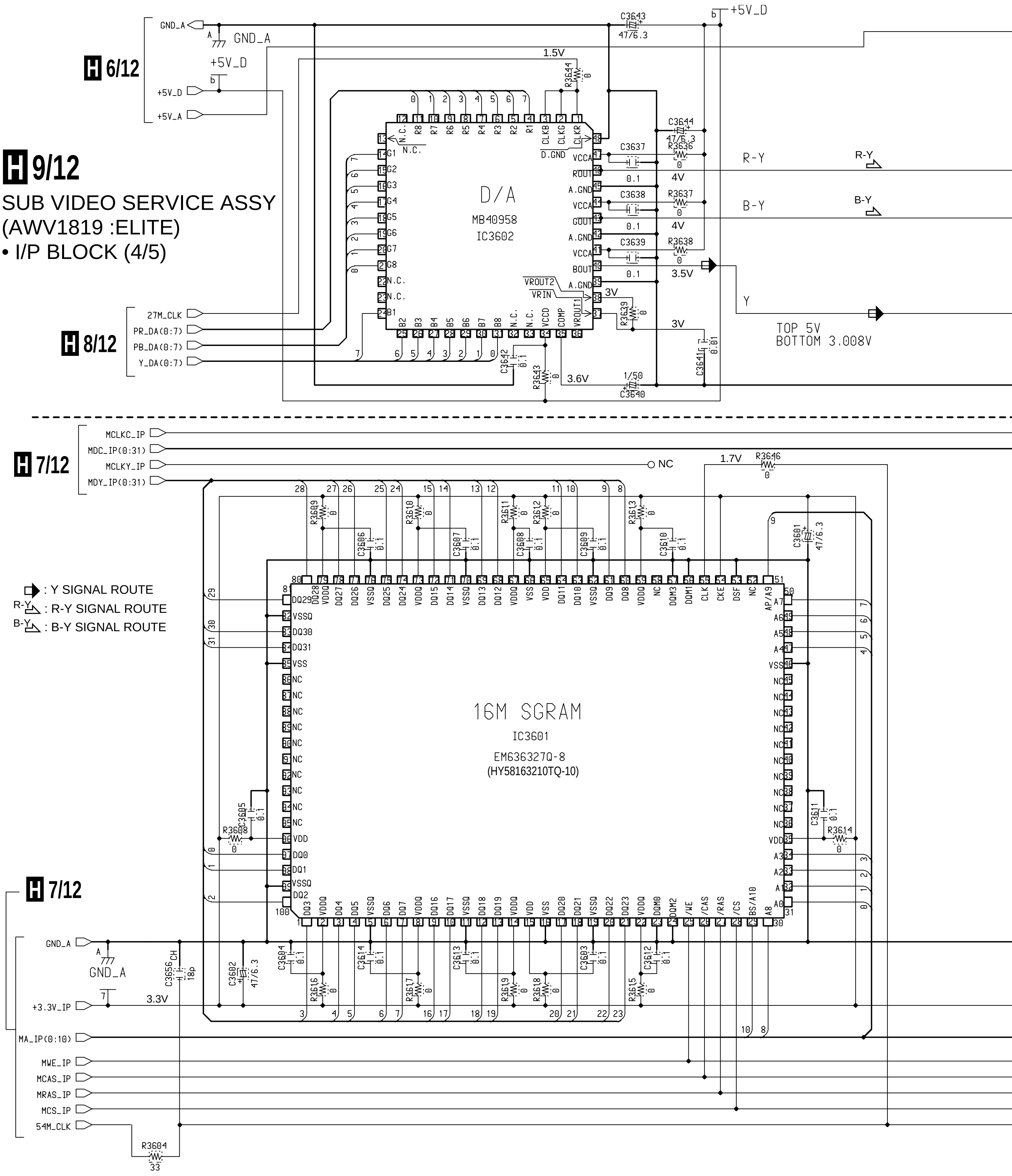
1/16W
AKX9002-A-T
QTL1013-A-T
2SC2712(YGR)-TLB
2SA1162(YGR)-TLB
1SS226-TRB
1SS352-TRB

H 8/12

SUB VIDEO SERVICE ASSY
(AWV1819 :ELITE)
• I/P BLOCK (3/5)


I/P IC102
IC3501
PE5067A 3/4
ANH1571-A
I/P IC102
IC3501
PE5067A 2/4
C3511 0.1
R3510 0
C3510 0.1
R3509 0
C3509 0.1
R3508 0
3V
3V
3V
3V
3V
R3511 0
C3512 0.1
IP_IC102_BUSB(0:4)
PRp(0:15)
Yp(0:15)
PBp(0:15)
Hp
Vp
Hi
Vi
Fi
H 7/12
Hi
Vi
Fi
H 10/12
Yi(0:7)
PBi(0:7)
PRi(0:7)
H 7/12
1.5V
C3513 0.1
R3512 0
C3517 0.1
R3516 0
C3514 0.1
R3513 0
R3533 100
K3512 DE_OUT
R3519 47
+5V_A
IC3503 TC7SET04FU-TLB
NC
IN A
GND
VCC
OUT Y
2.8V
0.3V
R3534 47
ACTIV HI
DH_PRO
C3518 0.1
57
IC3502 TC7SET04FU-TLB
NC
IN A
GND
VCC
OUT Y
4.1V
0.005V
R3535 47
ACTIV HI
DV_PRO
C3519 0.1
58
GND_A
H 3/12
27M_CLK
PR_DA(0:7)
Y_DA(0:7)
PB_DA(0:7)
H 9/12
R3515 0
C3516 0.1
C3515 0.1
R3514 0
R3532 100
C3506 100/6.3
R3537 47
K3511 FLD_OUT
56

3.25 SUB VIDEO SERVICE ASSY (9/12) (ELITE ONLY)

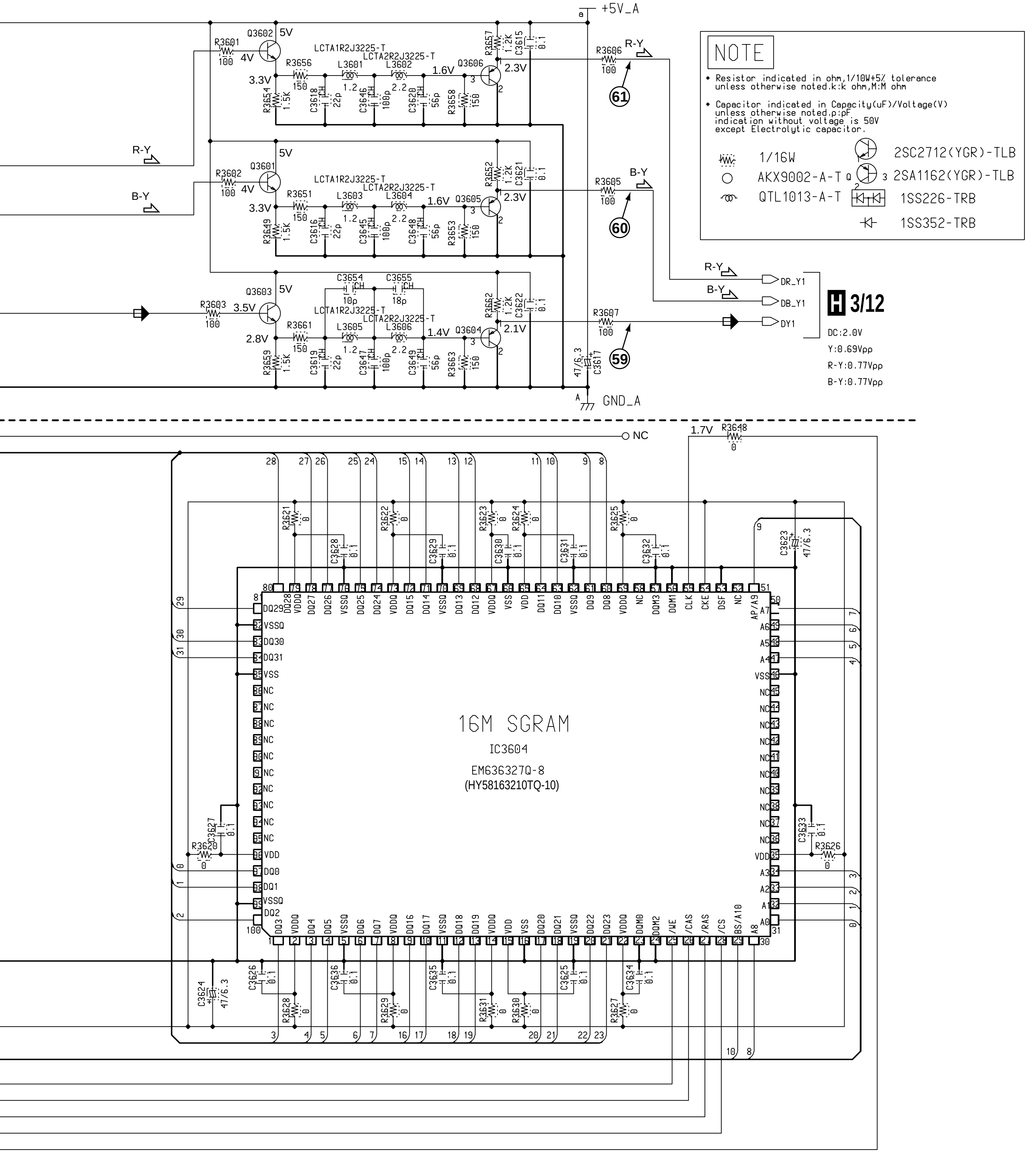


H 9/12

SUB VIDEO SERVICE ASSY
(AWV1819 :ELITE)
- I/P BLOCK (4/5)

H 6/12
GND_A
+5V_D
+5V_A
1.5V
C3643 47/6.3
R3644 0
D/A
MB40958
IC3602
N.C.
R8 R7 R6 R5 R4 R3 R2 R1
CLKB CLKG CLKR
D.GND
G1 G2 G3 G4 G5 G6 G7 G8
B1 B2 B3 B4 B5 B6 B7 B8
VCCA ROUT A.GND GOUT BOUT
VROUT2 VRIN VROUT1
VCCD COMP
C3644 47/6.3
C3637 0.1
R3636 0
C3638 0.1
R3637 0
C3639 0.1
R3638 0
4V
3.5V
3V
3.6V
R-Y
B-Y
Y
TOP 5V
BOTTOM 3.008V
R3639 0
C3641 0.01
C3642 0.1
R3643 0
C3640 1/50
H 8/12
27M_CLK
PR_DA(0:7)
PB_DA(0:7)
Y_DA(0:7)
H 7/12
MCLKC_IP
MDC_IP(0:31)
MCLKY_IP
MDY_IP(0:31)
NC
1.7V
R3646 0
R3609 0
R3610 0
R3611 0
R3612 0
R3613 0
C3606 0.1
C3607 0.1
C3608 0.1
C3609 0.1
C3610 0.1
C3601 47/6.3
16M SGRAM
IC3601
EM636327Q-8
(HY58163210TQ-10)
DQ0 DQ1 DQ2 DQ3 DQ4 DQ5 DQ6 DQ7
DQ8 DQ9 DQ10 DQ11 DQ12 DQ13 DQ14 DQ15
DQ16 DQ17 DQ18 DQ19 DQ20 DQ21 DQ22 DQ23
DQ24 DQ25 DQ26 DQ27 DQ28 DQ29 DQ30 DQ31
VDDQ VSSQ VDD VSS NC
DQM0 DQM1 DQM2 DQM3
CLK CKE DSF
AP/A9 A8 A7 A6 A5 A4 A3 A2 A1 A0
/WE /CAS /RAS /CS BS/A10
C3605 0.1
R3608 0
C3611 0.1
R3614 0
C3604 0.1
C3614 0.1
C3613 0.1
C3603 0.1
C3612 0.1
R3616 0
R3617 0
R3619 0
R3618 0
R3615 0
C3656 CH 18p
C3602 47/6.3
3.3V
+3.3V_IP
MA_IP(0:10)
MWE_IP
MCAS_IP
MRAS_IP
MCS_IP
54M_CLK
R3604 33

: Y SIGNAL ROUTE
R-Y : R-Y SIGNAL ROUTE
B-Y : B-Y SIGNAL ROUTE



NOTE

- Resistor indicated in ohm,1/10W±5% tolerance unless otherwise noted.k:k ohm,M:M ohm
- Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 50V except Electrolytic capacitor.

1/16W	2SC2712(YGR)-TLB
AKX9002-A-T	2SA1162(YGR)-TLB
QTL1013-A-T	1SS226-TRB
	1SS352-TRB

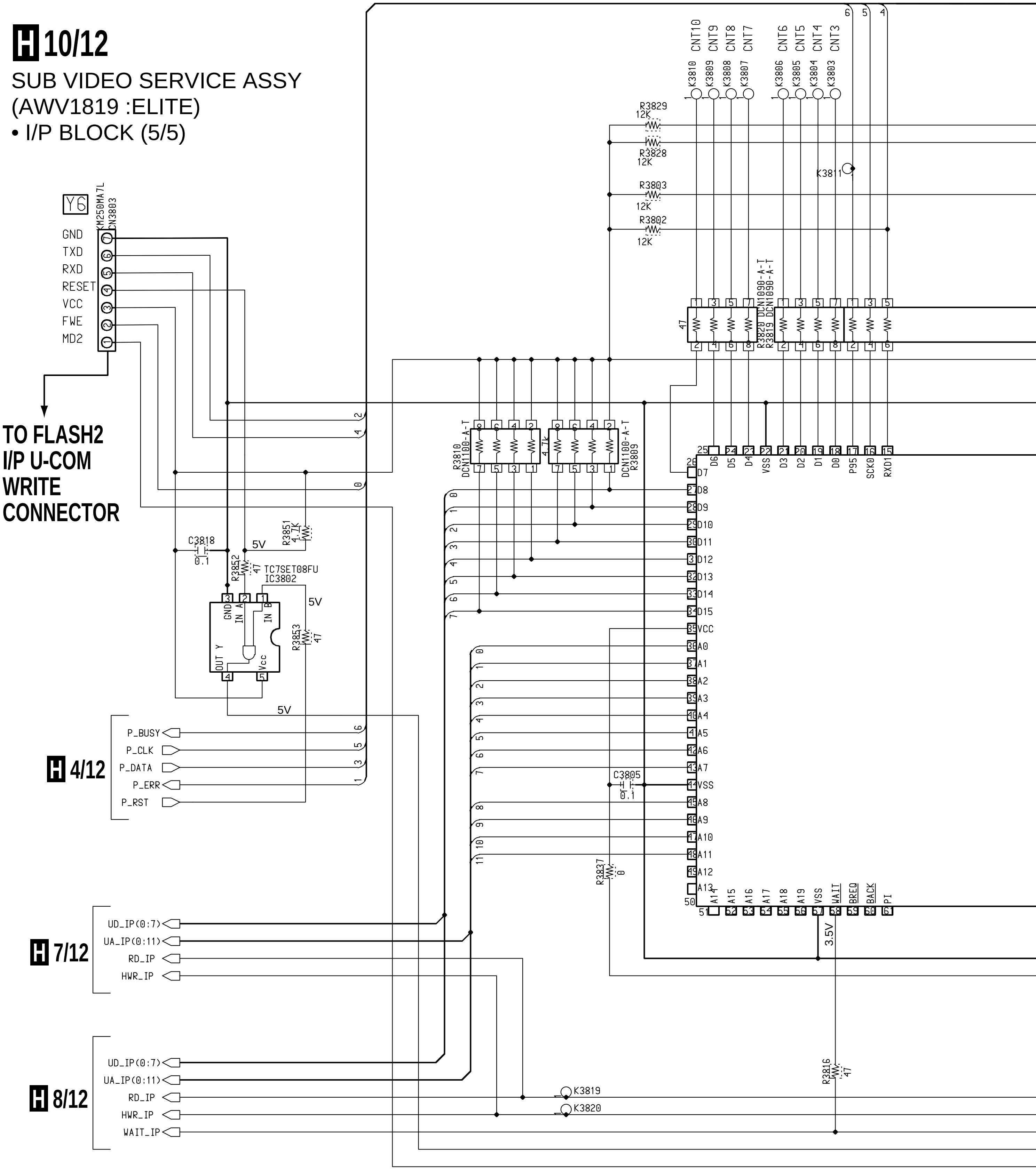
DC:2.0V
Y:0.69Vpp
R-Y:0.77Vpp
B-Y:0.77Vpp

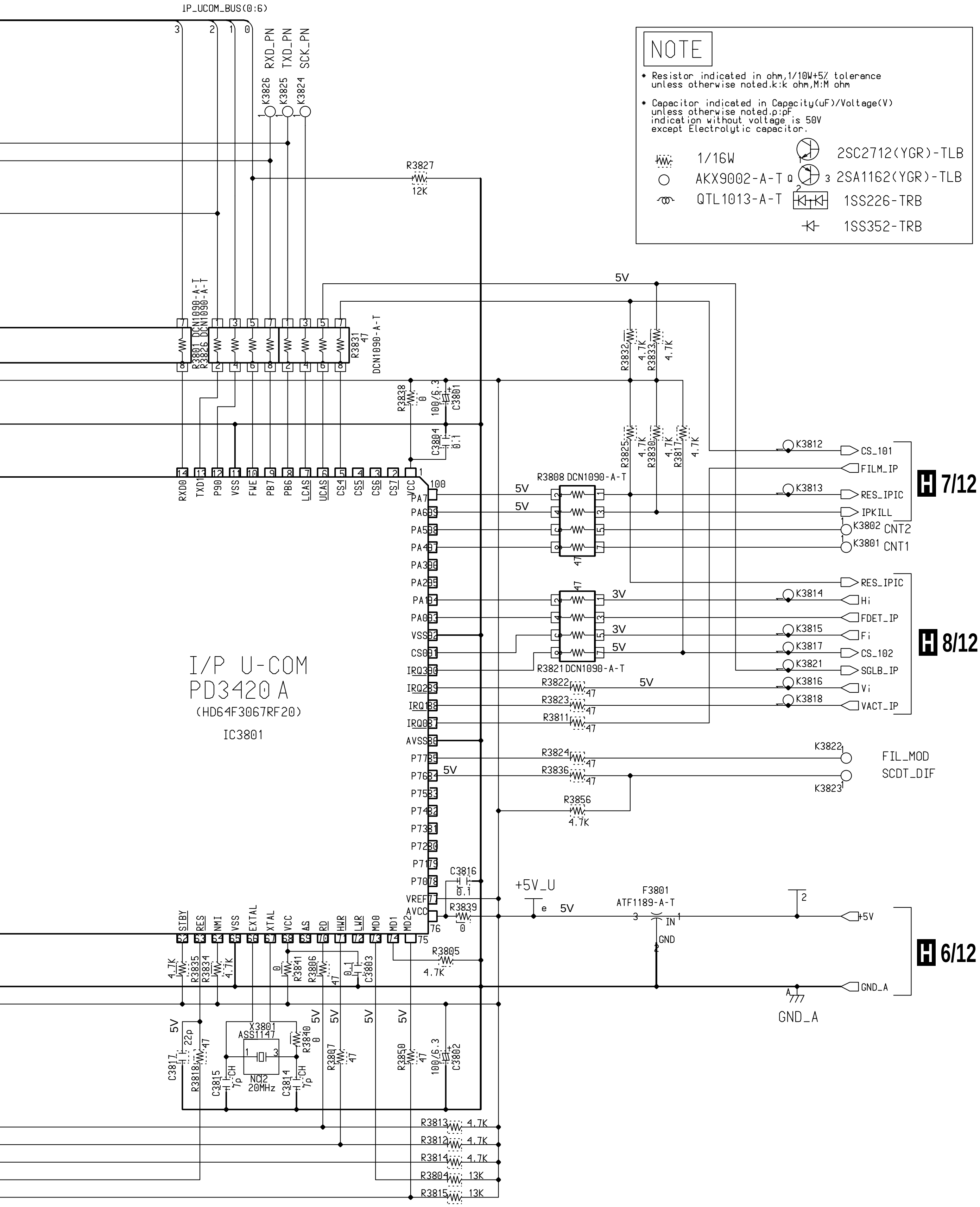
+5V_A
GND_A
Q3602
Q3601
Q3603
Q3606
Q3605
Q3604
R3601 100
R3602 100
R3603 100
R3606 100
R3605 100
R3607 100
LCTA1R2J3225-T
LCTA2R2J3225-T
L3601 1.2
L3602 2.2
L3603 1.2
L3604 2.2
L3605 1.2
L3606 2.2
C3654 10p
C3655 18p
C3617 47/6.3
5V
4V
3.3V
3.5V
2.8V
1.6V
1.4V
2.3V
2.1V
R-Y
B-Y
61
60
59
DR_Y1
DB_Y1
DY1
H 3/12
NC
1.7V
R3648 0
16M SGRAM
IC3604
EM636327Q-8
(HY58163210TQ-10)
C3623 47/6.3
C3624 47/6.3

3.26 SUB VIDEO SERVICE ASSY (10/12) (ELITE ONLY)

H 10/12

SUB VIDEO SERVICE ASSY
(AWV1819 :ELITE)
• I/P BLOCK (5/5)


Y6
KM250MA7L
CN3803
GND
TXD
RXD
RESET
VCC
FWE
MD2
TO FLASH2
I/P U-COM
WRITE
CONNECTOR
C3818
0.1
5V
R3852
47
R3851
4.7K
TC7SET08FU
IC3802
GND
IN A
IN B
OUT Y
Vcc
R3853
47
5V
5V
H 4/12
P_BUSY
P_CLK
P_DATA
P_ERR
P_RST
H 7/12
UD_IP(0:7)
UA_IP(0:11)
RD_IP
HWR_IP
H 8/12
UD_IP(0:7)
UA_IP(0:11)
RD_IP
HWR_IP
WAIT_IP
K3819
K3820
R3829
12K
R3828
12K
R3803
12K
R3802
12K
K3811
K3810 CNT10
K3809 CNT9
K3808 CNT8
K3807 CNT7
K3806 CNT6
K3805 CNT5
K3804 CNT4
K3803 CNT3
R3820 DCN1090-A-T
R3819 DCN1090-A-T
47
R3810
DCN1100-A-T
4.7k
DCN1100-A-T
R3809
D7
D8
D9
D10
D11
D12
D13
D14
D15
VCC
A0
A1
A2
A3
A4
A5
A6
A7
VSS
A8
A9
A10
A11
A12
A13
D6
D5
D4
VSS
D3
D2
D1
D0
P95
SCK0
RXD1
A14
A15
A16
A17
A18
A19
VSS
WAIT
BREQ
BACK
PI
C3805
0.1
R3837
0
3.5V
R3816
47


IP_UCOM_BUS(0:6)
3 2 1 0
K3826 RXD_PN
K3825 TXD_PN
K3824 SCK_PN
R3827 12K
5V
R3801 DCN1090-A-T
R3826 DCN1090-A-T
R3831 47 DCN1090-A-T
R3832 4.7K
R3833 4.7K
R3838 0
100/6.3 C3801
C3804 0.1
R3825 4.7K
R3830 4.7K
R3817 4.7K
RXD0 TXD1 P90 VSS FWE PB7 PB6 LCAS UCAS CS4 CS5 CS6 CS7 VCC
100
PA7 PA6 PA5 PA4 PA3 PA2 PA1 PA0 VSS CS0 IRQ3 IRQ2 IRQ1 IRQ0 AVSS P77 P76 P75 P74 P73 P72 P71 P70 VREF AVCC
R3808 DCN1090-A-T
47
R3821 DCN1090-A-T
3V
3V
5V
K3812 CS_101
FILM_IP
K3813 RES_IPIC
IPKILL
K3802 CNT2
K3801 CNT1
RES_IPIC
K3814 Hi
FDET_IP
K3815 Fi
K3817 CS_102
K3821 SGLB_IP
K3816 Vi
K3818 VACT_IP
H 7/12
H 8/12
I/P U-COM
PD3420 A
(HD64F3067RF20)
IC3801
R3822 47
R3823 47
R3811 47
R3824 47
R3836 47
R3856 4.7K
K3822 FIL_MOD
K3823 SCDT_DIF
C3816 0.1
R3839 0
+5V_U
5V
F3801
ATF1189-A-T
3 IN 1
GND 2
+5V
GND_A
GND_A
H 6/12
STBY RES NMI VSS EXTAL XTAL VCC AS RD HWR LWR MD0 MD1 MD2
76 75
R3805 4.7K
R3835 4.7K
R3834 4.7K
R3841 0
R3806 47
C3803 0.1
X3801 ASS1147
NC12 20MHz
R3840 0
C3817 22p
R3818 47
C3815 7p CH
C3814 7p CH
R3807 47
R3850 47
100/6.3 C3802
R3813 4.7K
R3812 4.7K
R3814 4.7K
R3804 13K
R3815 13K

NOTE

- Resistor indicated in ohm,1/10W±5% tolerance unless otherwise noted.k:k ohm,M:M ohm
- Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 50V except Electrolytic capacitor.

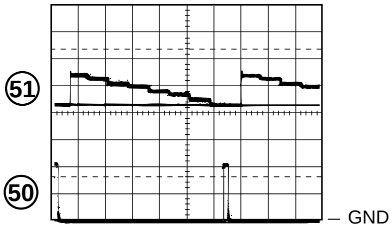
1/16W	2SC2712(YGR)-TLB
AKX9002-A-T	2SA1162(YGR)-TLB
QTL1013-A-T	1SS226-TRB
	1SS352-TRB

H 6/12 - 10/12

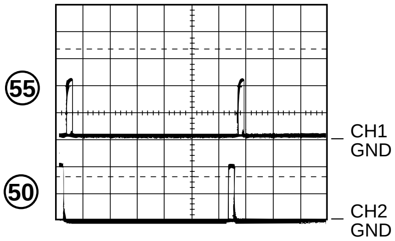
SUB VIDEO SERVICE ASSY (6/12-10/12)

Input signal
Video signal : EIA full field color-bar
Picture quality : Standard
Range :DC range (Unless otherwise noted)

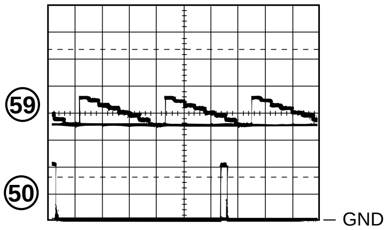
(50) **Foot of R3270 (MHP)**
V: 2V/div. H: 10µsec/div.
(51) **Foot of R3247 (Y2)**
V: 1V/div. H: 10µsec/div.



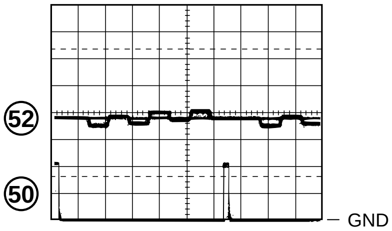
(50) **Foot of R3270 (MHP)**
V: 2V/div. H: 10µsec/div.
(55) **Foot of R3235 (CLP)**
V: 1V/div. H: 10µsec/div.



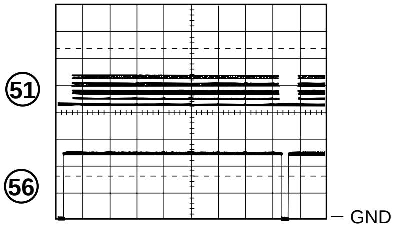
(50) **Foot of R3270 (MHP)**
V: 2V/div. H: 10µsec/div.
(59) **Foot of R3607 (DY1)**
V: 0.5V/div. H: 10µsec/div.



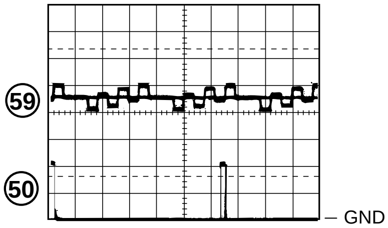
(50) **Foot of R3270 (MHP)**
V: 2V/div. H: 10µsec/div.
(52) **Foot of R3249 (B-Y2)**
V: 1V/div. H: 10µsec/div.



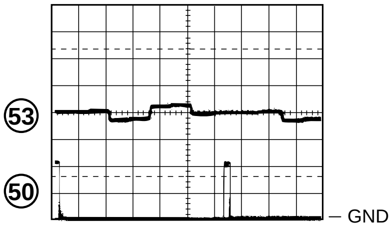
(51) **Foot of R3247 (Y2)**
V: 1V/div. H: 2msec/div.
(56) **Foot of R3537 (MVP)**
V: 2V/div. H: 2msec/div.



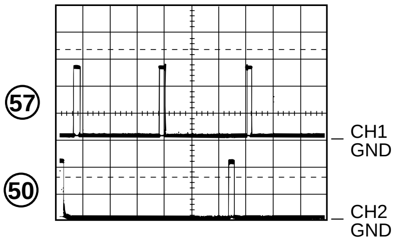
(50) **Foot of R3270 (MHP)**
V: 2V/div. H: 10µsec/div.
(60) **Foot of R33605 (DB_Y1)**
V: 0.5V/div. H: 10µsec/div.



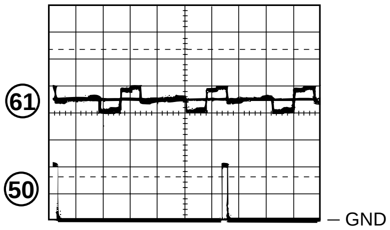
(50) **Foot of R3270 (MHP)**
V: 2V/div. H: 10µsec/div.
(53) **Foot of R3251 (R-Y2)**
V: 1V/div. H: 10µsec/div.



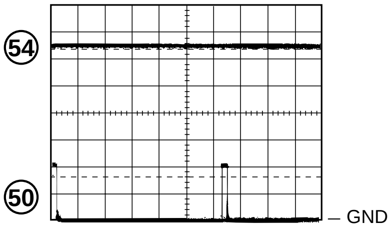
(50) **Foot of R3270 (MHP)**
V: 2V/div. H: 10µsec/div.
(57) **Foot of R3534 (DH_PRO)**
V: 2V/div. H: 10µsec/div.



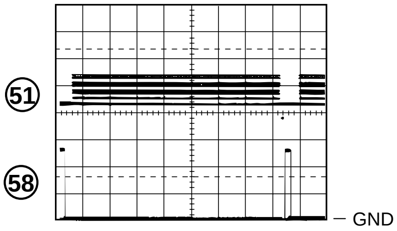
(50) **Foot of R3270 (MHP)**
V: 2V/div. H: 10µsec/div.
(61) **Foot of R3606 (DR_Y1)**
V: 0.5V/div. H: 10µsec/div.

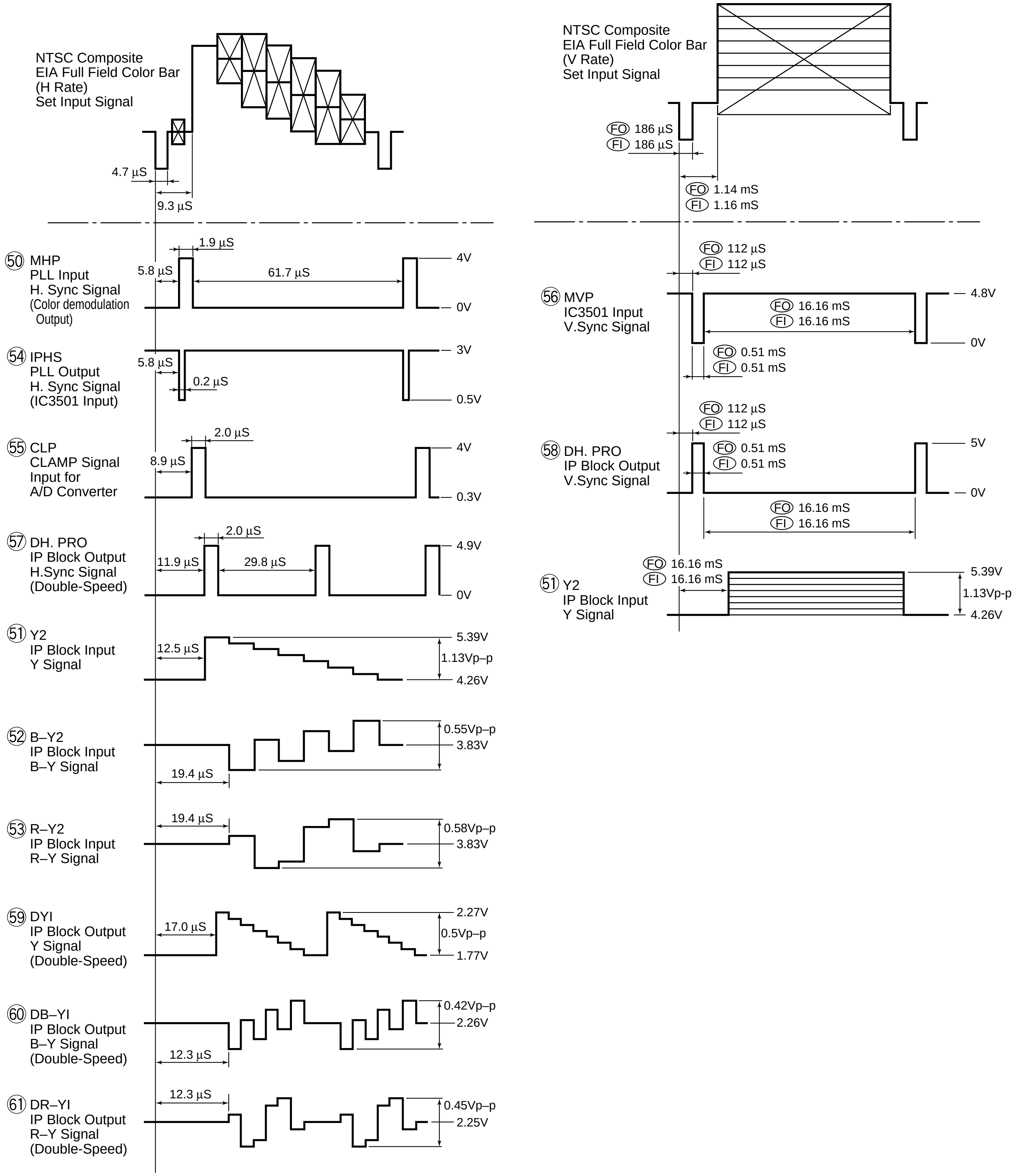


(50) **Foot of R3270 (MHP)**
V: 2V/div. H: 10µsec/div.
(54) **Foot of R3256 (IPHS)**
V: 1V/div. H: 10µsec/div.

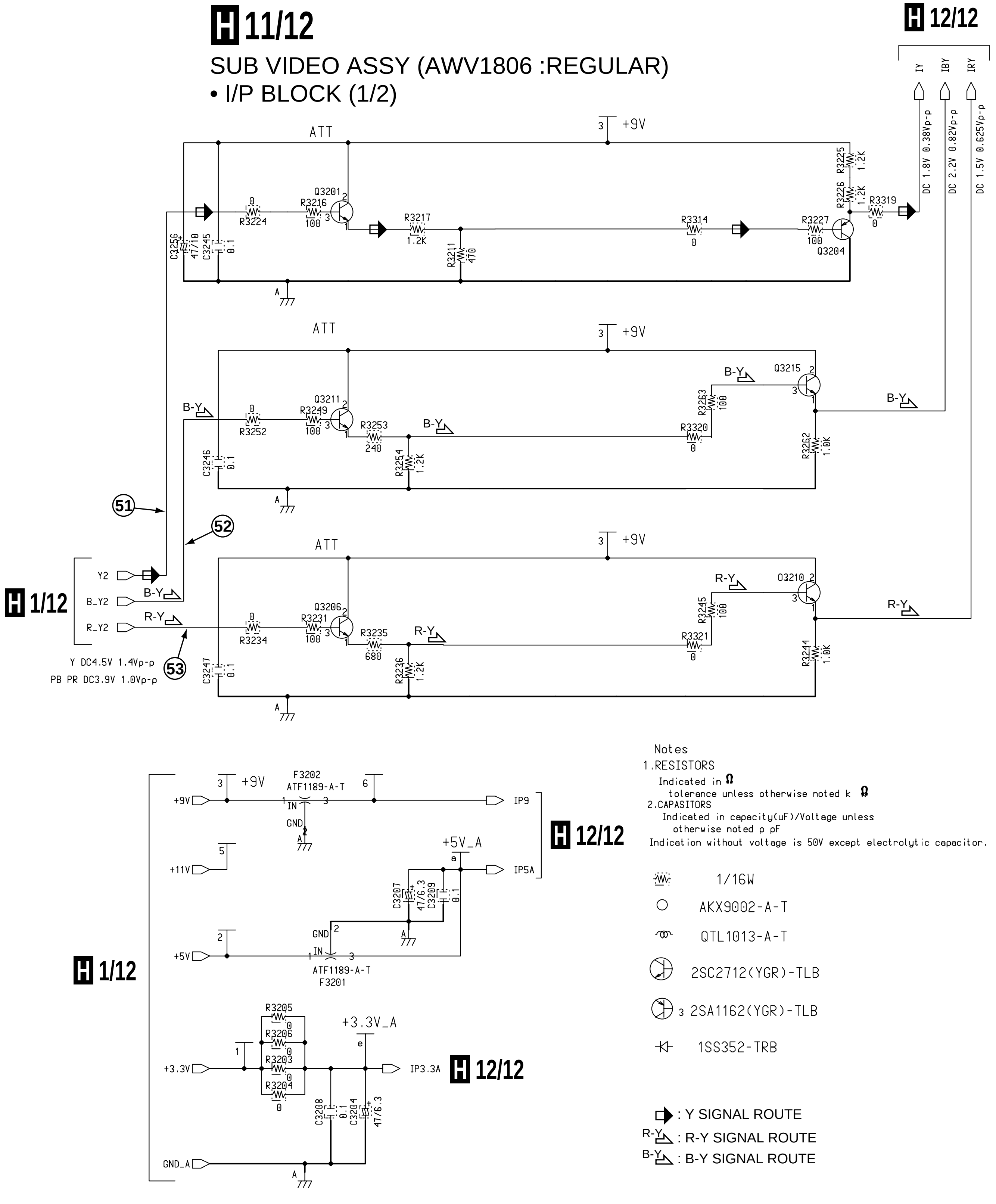


(51) **Foot of R3247 (Y2)**
V: 1V/div. H: 2msec/div.
(58) **Foot of R3535 (DV_PRO)**
V: 2V/div. H: 2msec/div.




NTSC Composite
EIA Full Field Color Bar
(H Rate)
Set Input Signal
4.7 µS
9.3 µS
NTSC Composite
EIA Full Field Color Bar
(V Rate)
Set Input Signal
FO 186 µS
FI 186 µS
FO 1.14 mS
FI 1.16 mS
㊿ MHP
PLL Input
H. Sync Signal
(Color demodulation Output)
5.8 µS
1.9 µS
61.7 µS
4V
0V
(54) IPHS
PLL Output
H. Sync Signal
(IC3501 Input)
5.8 µS
0.2 µS
3V
0.5V
(55) CLP
CLAMP Signal
Input for
A/D Converter
8.9 µS
2.0 µS
4V
0.3V
(57) DH. PRO
IP Block Output
H.Sync Signal
(Double-Speed)
11.9 µS
2.0 µS
29.8 µS
4.9V
0V
(51) Y2
IP Block Input
Y Signal
12.5 µS
5.39V
1.13Vp–p
4.26V
(52) B–Y2
IP Block Input
B–Y Signal
19.4 µS
0.55Vp–p
3.83V
(53) R–Y2
IP Block Input
R–Y Signal
19.4 µS
0.58Vp–p
3.83V
(59) DYI
IP Block Output
Y Signal
(Double-Speed)
17.0 µS
2.27V
0.5Vp–p
1.77V
(60) DB–YI
IP Block Output
B–Y Signal
(Double-Speed)
12.3 µS
0.42Vp–p
2.26V
(61) DR–YI
IP Block Output
R–Y Signal
(Double-Speed)
12.3 µS
0.45Vp–p
2.25V
FO 112 µS
FI 112 µS
(56) MVP
IC3501 Input
V.Sync Signal
FO 16.16 mS
FI 16.16 mS
FO 0.51 mS
FI 0.51 mS
4.8V
0V
FO 112 µS
FI 112 µS
(58) DH. PRO
IP Block Output
V.Sync Signal
FO 0.51 mS
FI 0.51 mS
5V
0V
FO 16.16 mS
FI 16.16 mS
(51) Y2
IP Block Input
Y Signal
FO 16.16 mS
FI 16.16 mS
5.39V
1.13Vp-p
4.26V

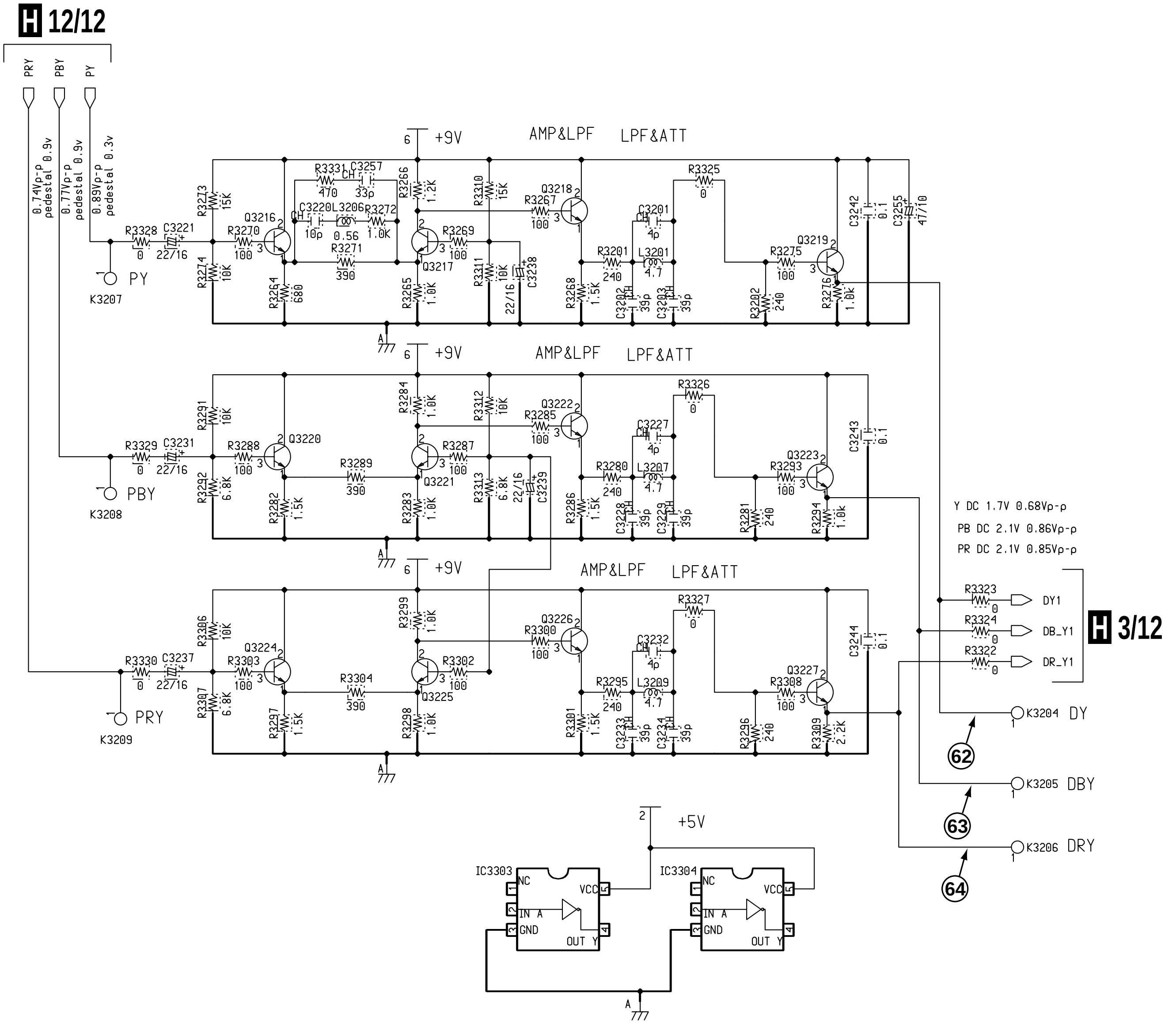
3.27 SUB VIDEO ASSY (11/12) (REGULAR ONLY)


H 11/12
SUB VIDEO ASSY (AWV1806 :REGULAR)
• I/P BLOCK (1/2)
H 12/12
IY
IBY
IRY
DC 1.8V 0.38Vp-p
DC 2.2V 0.82Vp-p
DC 1.5V 0.625Vp-p
ATT
+9V
Q3201
R3216 100
R3224 0
C3256 47/10
C3245 0.1
R3217 1.2K
R3211 470
R3314 0
R3227 100
Q3204
R3225 1.2K
R3226 1.2K
R3319 0
Q3211
R3249 100
R3252 0
R3253 240
R3254 1.2K
C3246 0.1
R3320 0
R3263 100
Q3215
R3262 1.0K
B-Y
Q3206
R3231 100
R3234 0
R3235 680
R3236 1.2K
C3247 0.1
R3321 0
R3245 100
Q3210
R3244 1.0K
R-Y
51
52
53
H 1/12
Y2
B_Y2
R_Y2
Y DC4.5V 1.4Vp-p
PB PR DC3.9V 1.0Vp-p
A
+9V
F3202
ATF1189-A-T
IN
GND
IP9
+11V
+5V_A
IP5A
C3207 47/6.3
C3209 0.1
+5V
ATF1189-A-T
F3201
R3205 0
R3206 0
R3203 0
R3204 0
+3.3V_A
+3.3V
IP3.3A
C3208 0.1
C3204 47/6.3
GND_A

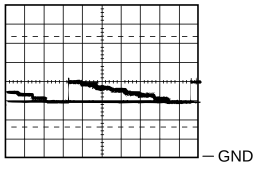
Notes
1.RESISTORS
Indicated in Ω
tolerance unless otherwise noted k Ω
2.CAPASITORS
Indicated in capacity(uF)/Voltage unless
otherwise noted p pF
Indication without voltage is 50V except electrolytic capacitor.

-W-	1/16W
○	AKX9002-A-T
~	QTL1013-A-T
⊕	2SC2712(YGR)-TLB
⊕ 3	2SA1162(YGR)-TLB
⊣◁	1SS352-TRB

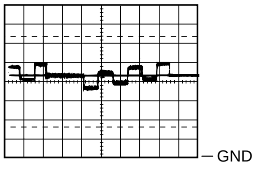
➡ : Y SIGNAL ROUTE
R-Y ⊿ : R-Y SIGNAL ROUTE
B-Y ⊿ : B-Y SIGNAL ROUTE


H 12/12
PRY
PBY
PY
0.74Vp-p pedestal 0.9v
0.77Vp-p pedestal 0.9v
0.89Vp-p pedestal 0.3v
+9V
AMP&LPF
LPF&ATT
R3328 0
C3221 22/16
R3273 15K
R3274 10K
R3270 100
Q3216
R3264 680
R3331 470
C3257 CH 33p
C3220 CH 10p
L3206 0.56
R3272 1.0K
R3271 390
R3266 1.2K
R3265 1.0K
Q3217
R3269 100
R3310 15K
R3311 10K
C3238 22/16
Q3218
R3267 100
R3268 1.5K
R3201 240
C3201 CH 4p
L3201 4.7
C3202 CH 39p
C3203 CH 39p
R3325 0
R3202 240
R3275 100
Q3219
R3276 1.0k
C3242 0.1
C3255 47/10
PY
K3207
R3329 0
C3231 22/16
R3291 10K
R3292 6.8K
R3288 100
Q3220
R3282 1.5K
R3289 390
R3284 1.0K
R3283 1.0K
Q3221
R3287 100
R3312 10K
R3313 6.8K
C3239 22/16
Q3222
R3285 100
R3286 1.5K
R3280 240
C3227 CH 4p
L3207 4.7
C3228 CH 39p
C3229 CH 39p
R3326 0
R3281 240
R3293 100
Q3223
R3294 1.0k
C3243 0.1
PBY
K3208
R3330 0
C3237 22/16
R3306 10K
R3307 6.8K
R3303 100
Q3224
R3297 1.5K
R3304 390
R3299 1.0K
R3298 1.0K
Q3225
R3302 100
Q3226
R3300 100
R3301 1.5K
R3295 240
C3232 CH 4p
L3209 4.7
C3233 CH 39p
C3234 CH 39p
R3327 0
R3296 240
R3308 100
Q3227
R3309 2.2K
C3244 0.1
PRY
K3209
Y DC 1.7V 0.68Vp-p
PB DC 2.1V 0.86Vp-p
PR DC 2.1V 0.85Vp-p
R3323 0
DY1
R3324 0
DB_Y1
R3322 0
DR_Y1
H 3/12
K3204 DY
62
K3205 DBY
63
K3206 DRY
64
+5V
IC3303
IC3304
NC
VCC
IN A
GND
OUT Y
A

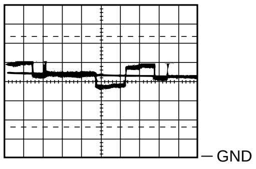
62 **K3204 (DY)**
V: 0.5V/div. H: 1μsec/div.



63 **K3205 (DB-Y1)**
V: 0.5V/div. H: 1μsec/div.



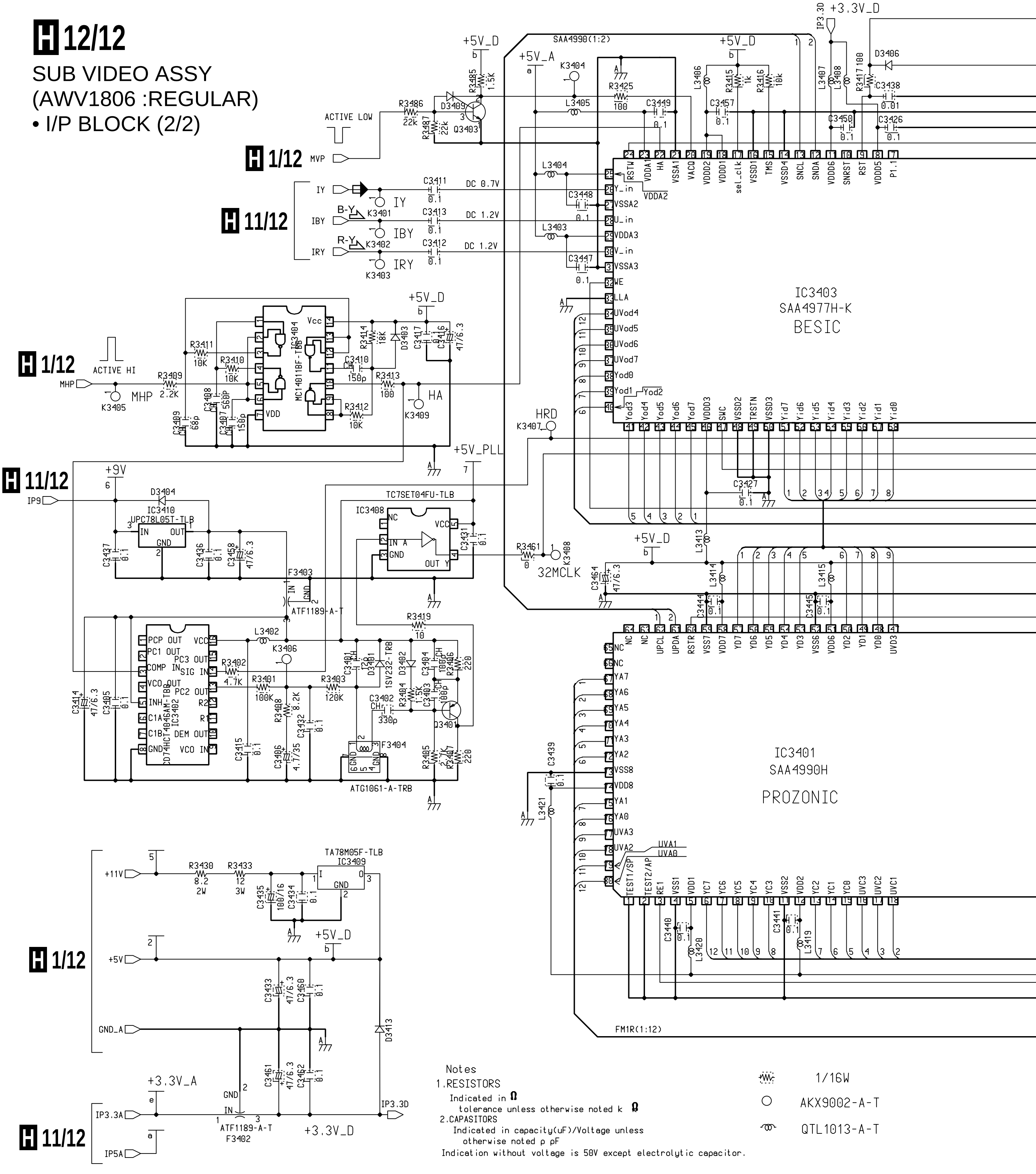
64 **K3206 (DR-Y1)**
V: 0.5V/div. H: 1μsec/div.



3.28 SUB VIDEO ASSY (12/12) (REGULAR ONLY)

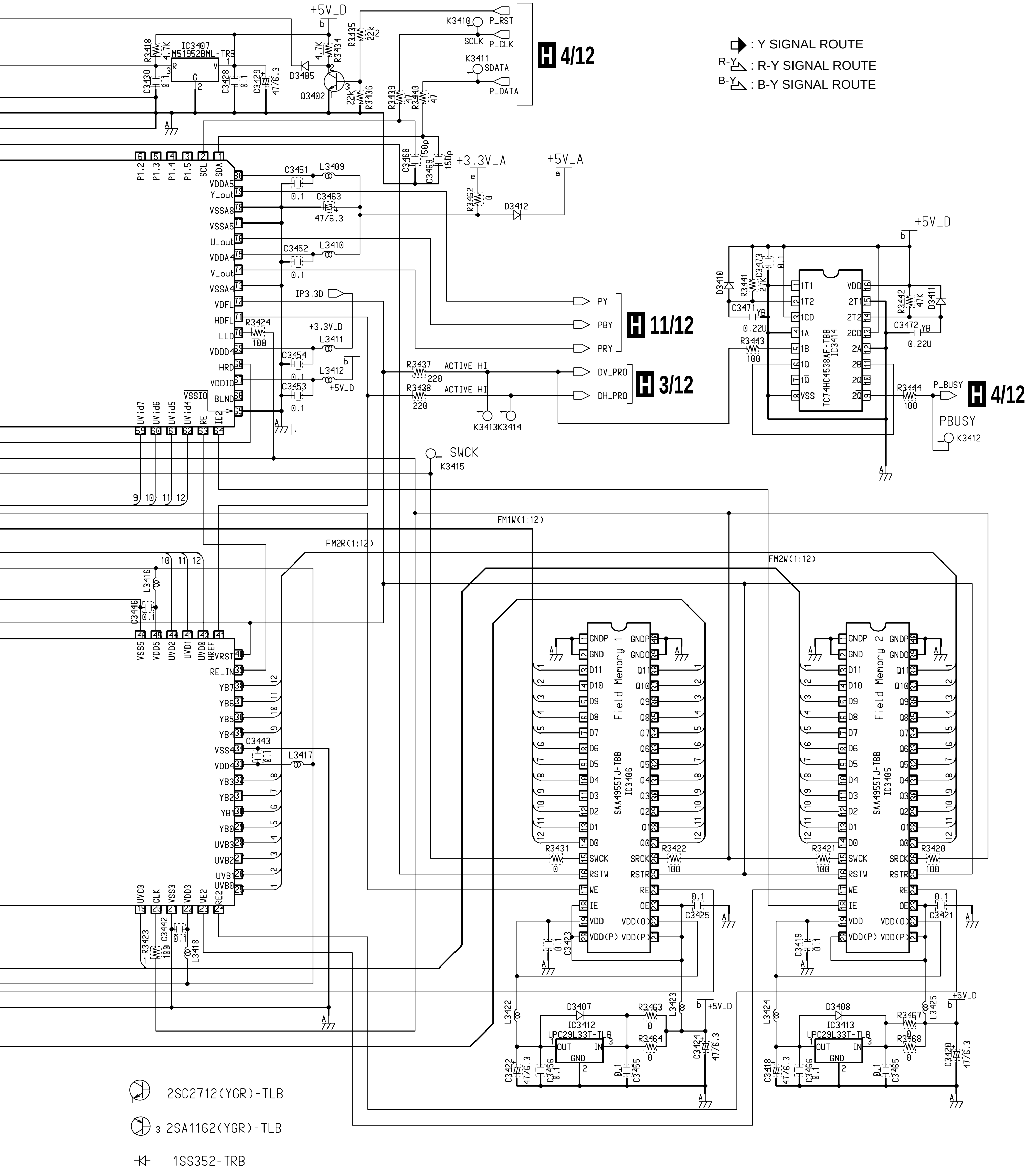
H 12/12

SUB VIDEO ASSY
(AWV1806 :REGULAR)
• I/P BLOCK (2/2)

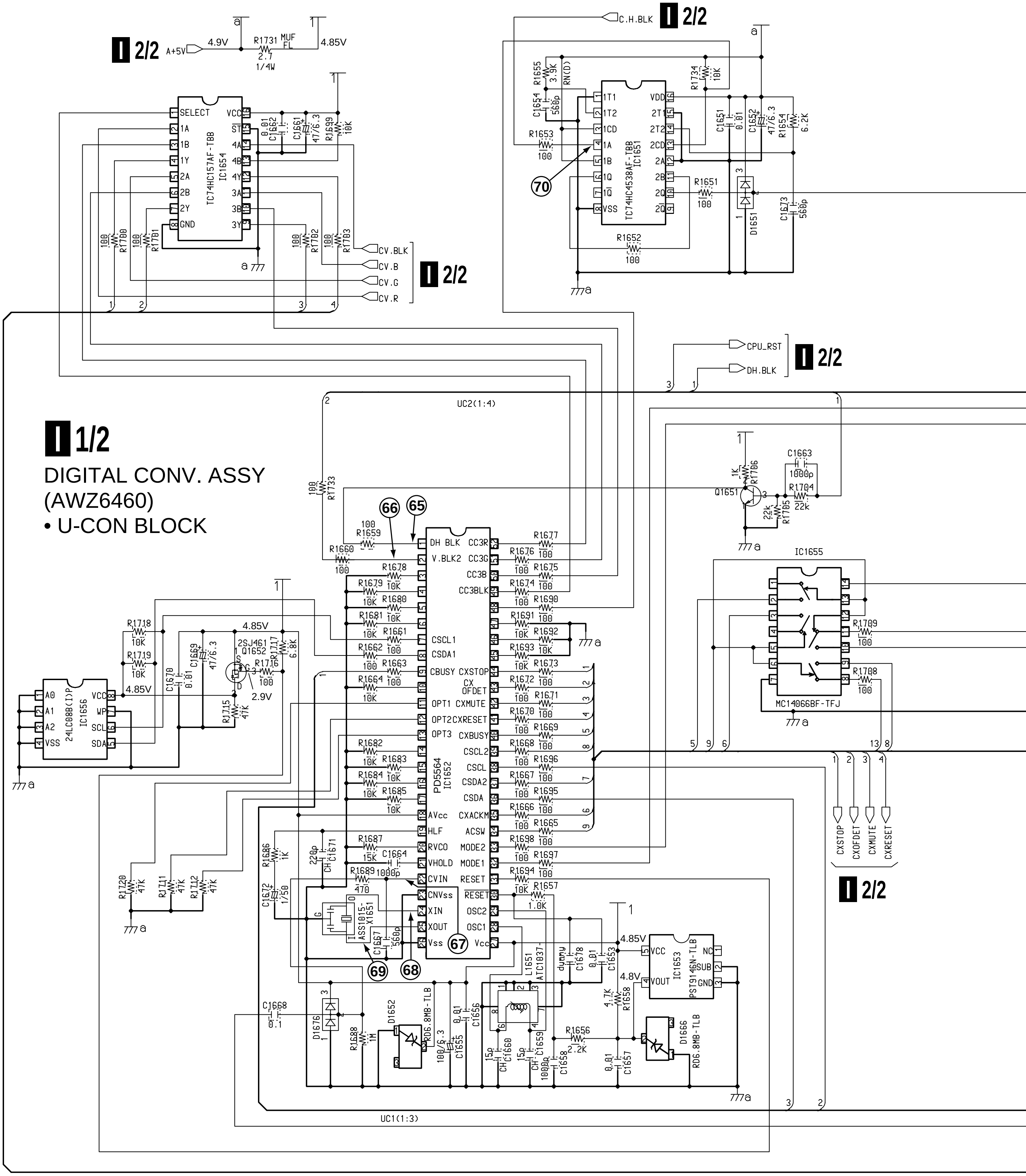

A
B
C
D
H 1/12
MVP
ACTIVE LOW
H 11/12
IY
IBY
IRY
B-Y
R-Y
K3401
K3402
K3403
DC 0.7V
DC 1.2V
C3411 0.1
C3413 0.1
C3412 0.1
+5V_D
+5V_A
SAA4990(1:2)
K3404
R3485 1.5k
R3486 22k
R3487 22k
D3409
Q3403
L3405
L3404
L3403
C3448 0.1
C3447 0.1
R3425 100
C3449 0.1
L3406
R3415 1k
R3416 10k
C3457 0.1
L3407
L3408
R3417 100
IP3.3D
+3.3V_D
D3406
C3438 0.01
C3450 0.1
C3426 0.1
RSTW
VDDA1
HA
VSSA1
VACQ
VDDD2
VDDD1
sel_clk
VSSD1
TMS
VSSD4
SNCL
SNDA
VDDD6
SNRST
RST
VDDD5
P1.1
Y_in
VSSA2
VDDA2
U_in
VDDA3
V_in
VSSA3
WE
LLA
UVod4
UVod5
UVod6
UVod7
Yod0
Yod1
Yod2
Yod3
Yod4
Yod5
Yod6
Yod7
VDDD3
SWC
VSSD2
TRSTN
VSSD3
Yid7
Yid6
Yid5
Yid4
Yid3
Yid2
Yid1
Yid0
IC3403
SAA4977H-K
BESIC
H 1/12
ACTIVE HI
MHP
R3409 2.2K
K3405
R3411 10K
R3410 10K
C3408 560P
C3407 150p
C3409 68p
IC3404
MC14011BF-TB8
Vcc
VDD
C3410 150p
R3413 100
R3412 10K
R3414 18K
D3403
C3417 0.1
C3416 47/6.3
K3409
HA
HRD
K3407
+5V_PLL
H 11/12
IP9
+9V
D3404
IC3410
UPC78L05T-TLB
IN
OUT
GND
C3437 0.1
C3436 0.1
C3458 47/6.3
F3403
ATF1189-A-T
TC7SET04FU-TLB
IC3408
NC
VCC
IN A
GND
OUT Y
C3431 0.1
R3461 0
K3408
32MCLK
C3427 0.1
L3413
C3464 47/6.3
L3414
L3415
C3444 0.1
C3445 0.1
C3414 47/6.3
C3405 0.1
IC3402
CD74HCT4046AM-TB8
PCP OUT
PC1 OUT
COMP IN
VCO OUT
INH
C1A
C1B
GND
VCC
PC3 OUT
SIG IN
PC2 OUT
R2
R1
DEM OUT
VCO IN
L3402
K3406
R3402 4.7K
R3401 100K
R3408 8.2K
C3432 0.1
C3415 0.1
C3406 4.7/35
R3403 120K
C3401 CH 120
D3401 1SV232-TRB
D3402
C3404 CH 100p
R3406 220
C3402 CH 330p
R3404 1.5K
R3419 10
Q3401
F3404
ATG1061-A-TRB
R3405 2.7K
R3407 220
NC
UPCL
UPDA
RSTR
VSS7
VDD7
YD7
YD6
YD5
YD4
YD3
VSS6
VDD6
YD2
YD1
YD0
UVD3
YA7
YA6
YA5
YA4
YA3
YA2
VSS8
VDD8
YA1
YA0
UVA3
UVA2
UVA1
UVA0
TEST1/SP
TEST2/AP
RE1
VSS1
VDD1
YC7
YC6
YC5
YC4
YC3
VSS2
VDD2
YC2
YC1
YC0
UVC3
UVC2
UVC1
IC3401
SAA4990H
PROZONIC
C3439 0.1
L3421
C3440 0.1
L3420
C3441 0.1
L3419
FM1R(1:12)
TA78M05F-TLB
IC3409
+11V
R3430 8.2 2W
R3433 12 3W
C3435 100/16
C3434 0.1
H 1/12
+5V
GND_A
C3433 47/6.3
C3460 0.1
D3413
+3.3V_A
C3461 47/6.3
C3462 0.1
IP3.3A
IP5A
H 11/12
ATF1189-A-T
F3402
+3.3V_D
IP3.3D

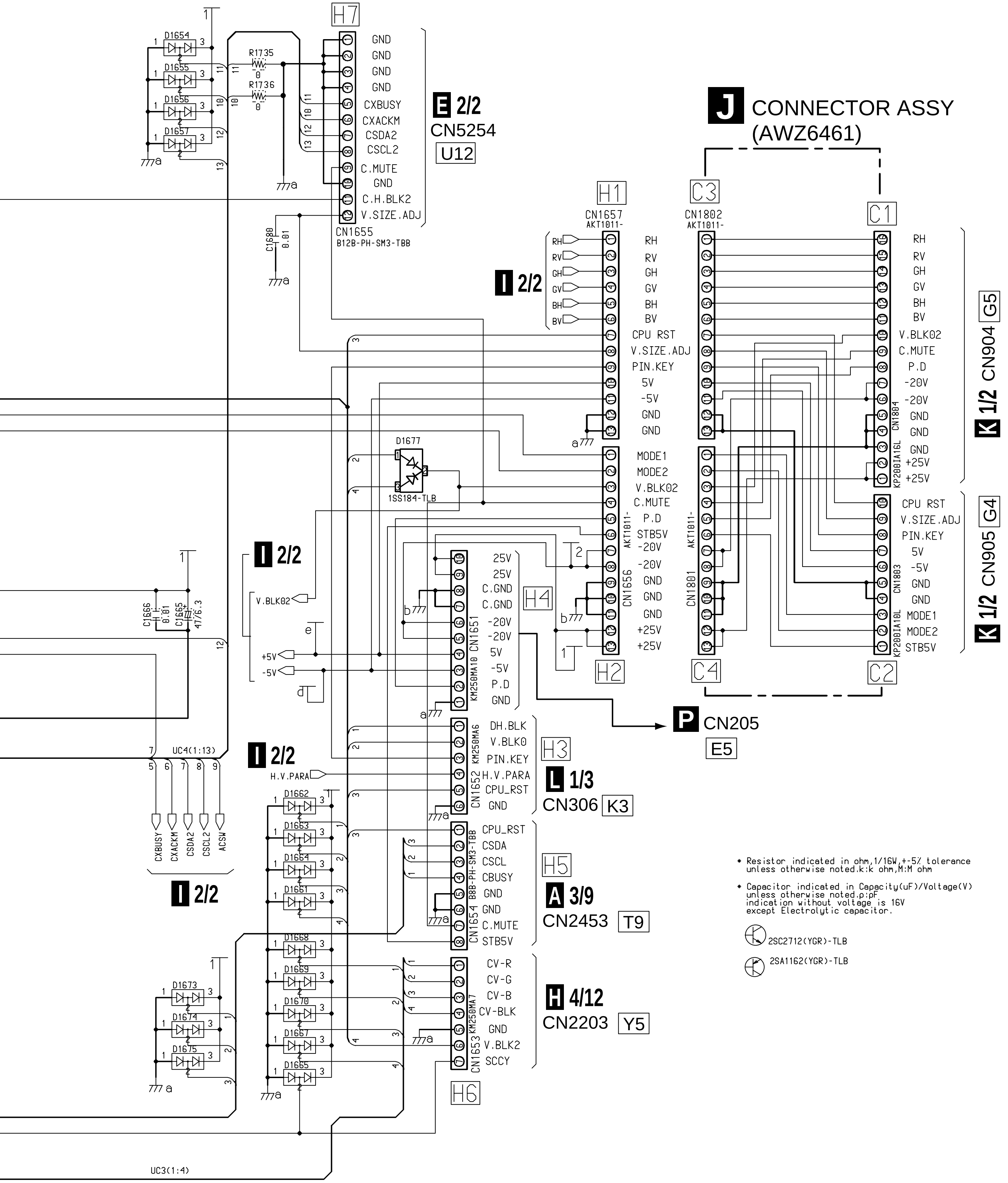
Notes
1.RESISTORS
Indicated in Ω
tolerance unless otherwise noted k Ω
2.CAPASITORS
Indicated in capacity(uF)/Voltage unless
otherwise noted p pF
Indication without voltage is 50V except electrolytic capacitor.

▨	1/16W
○	AKX9002-A-T
⌇	QTL1013-A-T


: Y SIGNAL ROUTE
R-Y : R-Y SIGNAL ROUTE
B-Y : B-Y SIGNAL ROUTE
+5V_D
K3410 P_RST
SCLK P_CLK
K3411 SDATA
P_DATA
H 4/12
IC3407 M51952BML-TRB
R3418 4.7K
C3430 0.1
C3428 0.1
C3429 47/6.3
D3405
Q3402
R3434 4.7K
R3435 22k
R3436 22k
R3439 47
R3440 47
C3468 150p
C3469 150p
+3.3V_A
+5V_A
R3462 0
D3412
P1.2 P1.3 P1.4 P1.5 SCL SDA
VDDA5 Y_out VSSA8 VSSA5 U_out VDDA4 V_out VSSA4 VDFL HDFL LLD VDDD4 HRD VDDIO BLND VSSIO RE IE2
UVid7 UVid6 UVid5 UVid4
C3451 0.1
L3409
C3463 47/6.3
C3452 0.1
L3410
IP3.3D
R3424 100
+3.3V_D
L3411
C3454 0.1
L3412
+5V_D
C3453 0.1
PY
PBY
PRY
H 11/12
DV_PRO
DH_PRO
H 3/12
R3437 220 ACTIVE HI
R3438 220 ACTIVE HI
K3413 K3414
SWCK
K3415
FM1W(1:12)
FM2R(1:12)
FM2W(1:12)
+5V_D
D3410
R3441 27K
C3473 0.1
C3471 YB 0.22U
R3443 100
1T1 1T2 1CD 1A 1B 1Q 1Q VSS
VDD 2T1 2T2 2CD 2A 2B 2Q 2Q
TC74HC4538AF-TBB IC3414
R3442 47K
D3411
C3472 YB 0.22U
R3444 100
P_BUSY
H 4/12
PBUSY
K3412
L3416
C3446 0.1
VSS5 VDD5 UVD2 UVD1 VDDO HREF
VRST RE_IN YB7 YB6 YB5 YB4 VSS4 VDD4 YB3 YB2 YB1 YB0 UVB3 UVB2 UVB1 UVB0
UVC0 CLK VSS3 VDD3 WE2 RE2
C3443 0.1
L3417
R3423 100
C3442 0.1
L3418
GNDP GND D11 D10 D9 D8 D7 D6 D5 D4 D3 D2 D1 D0 SWCK RSTW WE IE VDD VDD(P)
GNDP GNDO Q11 Q10 Q9 Q8 Q7 Q6 Q5 Q4 Q3 Q2 Q1 Q0 SRCK RSTR RE OE VDD(O) VDD(P)
Field Memory 1
SAA4955TJ-TBB IC3406
Field Memory 2
SAA4955TJ-TBB IC3405
R3431 0
R3422 100
C3425 0.1
C3423 0.1
R3421 100
R3420 100
C3421 0.1
C3419 0.1
L3422
D3407
IC3412 UPC29L33T-TLB
OUT IN GND
R3463 0
R3464 0
L3423
+5V_D
C3422 47/6.3
C3456 0.1
C3455 0.1
C3424 47/6.3
L3424
D3408
IC3413 UPC29L33T-TLB
R3467 0
R3468 0
L3425
C3418 47/6.3
C3466 0.1
C3465 0.1
C3420 47/6.3
2SC2712(YGR)-TLB
2SA1162(YGR)-TLB
1SS352-TRB

3.29 DIGITAL CONV. (1/2) and CONNECTOR ASSYS

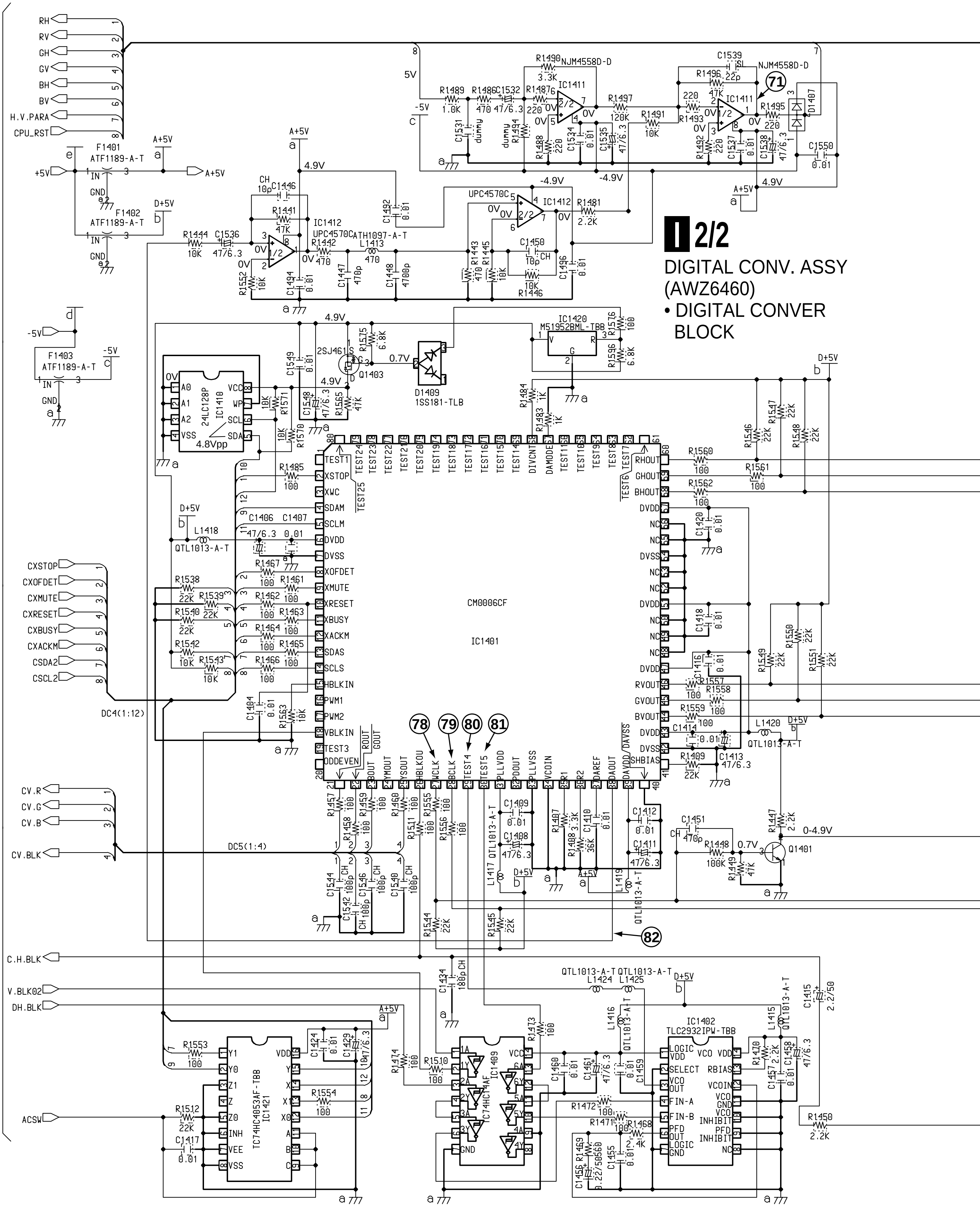

I 2/2
A+5V
4.9V
R1731 2.7 1/4W
MUF FL
4.85V
TC74HC157AF-TBB
IC1654
SELECT
VCC
ST
1A
1B
1Y
2A
2B
2Y
GND
4A
4B
4Y
3A
3B
3Y
C1662 0.01
C1661 47/6.3
R1699 10K
R1700 100
R1701 100
R1702 100
R1703 100
CV.BLK
CV.B
CV.G
CV.R
C.H.BLK
R1655 3.9K
RN(D)
C1654 560p
R1653 100
TC74HC4538AF-TBB
IC1651
1T1
1T2
1CD
1Q
VSS
VDD
2T1
2T2
2CD
2A
2B
2Q
R1734 10K
C1651 0.01
C1652 47/6.3
R1654 6.2K
R1651 100
R1652 100
D1651
C1673 560p
70
CPU_RST
DH.BLK
UC2(1:4)
I 1/2
DIGITAL CONV. ASSY
(AWZ6460)
• U-CON BLOCK
R1733 100
66
65
R1659 100
R1660 100
Q1651
R1706 1K
C1663 1000p
R1704 22k
R1705 22k
IC1655
MC14066BF-TFJ
R1709 100
R1708 100
PD5564
IC1652
DH BLK
V.BLK2
CSCL1
CSDA1
CBUSY
OPT1
OPT2
OPT3
AVcc
HLF
RVCO
VHOLD
CVIN
CNVss
XIN
XOUT
Vss
CC3R
CC3G
CC3B
CC3BLK
CXSTOP
CX OFDET
CXMUTE
CXRESET
CXBUSY
CSCL2
CSCL
CSDA2
CSDA
CXACKM
ACSW
MODE2
MODE1
RESET
OSC2
OSC1
Vcc
R1677 100
R1676 100
R1675 100
R1674 100
R1690 100
R1691 10K
R1692 10K
R1693 10K
R1673 100
R1672 100
R1671 100
R1670 100
R1669 100
R1668 100
R1696 100
R1667 100
R1695 100
R1666 100
R1665 100
R1698 100
R1697 100
R1694 10K
R1657 1.0K
R1678 10K
R1679 10K
R1680 10K
R1681 10K
R1661 100
R1662 100
R1663 100
R1664 10K
R1682 10K
R1683 10K
R1684 10K
R1685 10K
R1687 15K
C1664 1000p
R1689 470
C1671 220p
R1686 1K
C1672 1/50
ASS1015-X1651
C1667 560p
67
68
69
CXSTOP
CXOFDET
CXMUTE
CXRESET
I 2/2
R1718 10K
R1719 10K
24LC08B(I)P
IC1656
A0
A1
A2
VSS
VCC
WP
SCL
SDA
4.85V
C1670 0.01
C1669 47/6.3
2SJ461
Q1652
R1716 100
R1717 6.8K
R1715 47K
2.9V
R1720 47K
R1711 47K
R1712 47K
C1668 0.1
D1676
R1688 1M
D1652 RD6.8MB-TLB
C1655 100/6.3
C1656 0.01
C1660 15p
C1659 15p
C1658 1000p
L1651 ATC1037-
C1678 dummy
C1653 0.01
R1656 2.2K
C1657 0.01
R1658 4.7K
4.85V
4.8V
IC1653
PST9146N-TLB
VCC
VOUT
NC
SUB
GND
D1666 RD6.8MB-TLB
UC1(1:3)


H7
GND
GND
GND
GND
CXBUSY
CXACKM
CSDA2
CSCL2
C.MUTE
GND
C.H.BLK2
V.SIZE.ADJ
CN1655
B12B-PH-SM3-TBB
E 2/2
CN5254
U12
D1654
D1655
D1656
D1657
R1735
0
R1736
0
C1680
0.01
J
CONNECTOR ASSY
(AWZ6461)
H1
CN1657
AKT1011-
RH
RV
GH
GV
BH
BV
CPU RST
V.SIZE.ADJ
PIN.KEY
5V
-5V
GND
GND
I 2/2
C3
CN1802
AKT1011-
C1
RH
RV
GH
GV
BH
BV
V.BLK02
C.MUTE
P.D
-20V
-20V
GND
GND
GND
+25V
+25V
CN1804
KP200IA16L
K 1/2 CN904 G5
D1677
1SS184-TLB
MODE1
MODE2
V.BLK02
C.MUTE
P.D
STB5V
-20V
-20V
GND
GND
GND
+25V
+25V
AKT1011-
CN1656
H2
CN1801
AKT1011-
C4
CPU RST
V.SIZE.ADJ
PIN.KEY
5V
-5V
GND
GND
MODE1
MODE2
STB5V
CN1803
KP200IA10L
C2
K 1/2 CN905 G4
I 2/2
V.BLK02
+5V
-5V
25V
25V
C.GND
C.GND
-20V
-20V
5V
-5V
P.D
GND
CN1651 KM250MA10
H4
P CN205
E5
C1666
0.01
C1665
47/6.3
UC4(1:13)
CXBUSY
CXACKM
CSDA2
CSCL2
ACSW
I 2/2
I 2/2
H.V.PARA
DH.BLK
V.BLK0
PIN.KEY
H.V.PARA
CPU_RST
GND
CN1652 KM250MA6
H3
L 1/3
CN306 K3
D1662
D1663
D1664
D1661
CPU_RST
CSDA
CSCL
CBUSY
GND
GND
C.MUTE
STB5V
CN1654 B8B-PH-SM3-TBB
H5
A 3/9
CN2453 T9
D1668
D1669
D1670
D1667
D1665
D1673
D1674
D1675
CV-R
CV-G
CV-B
CV-BLK
GND
V.BLK2
SCCY
CN1653 KM250MA7
H 4/12
CN2203 Y5
H6
UC3(1:4)
2SC2712(YGR)-TLB
2SA1162(YGR)-TLB

- Resistor indicated in ohm,1/16W,+-5% tolerance unless otherwise noted.k:k ohm,M:M ohm
- Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 16V except Electrolytic capacitor.

I 1/2 J

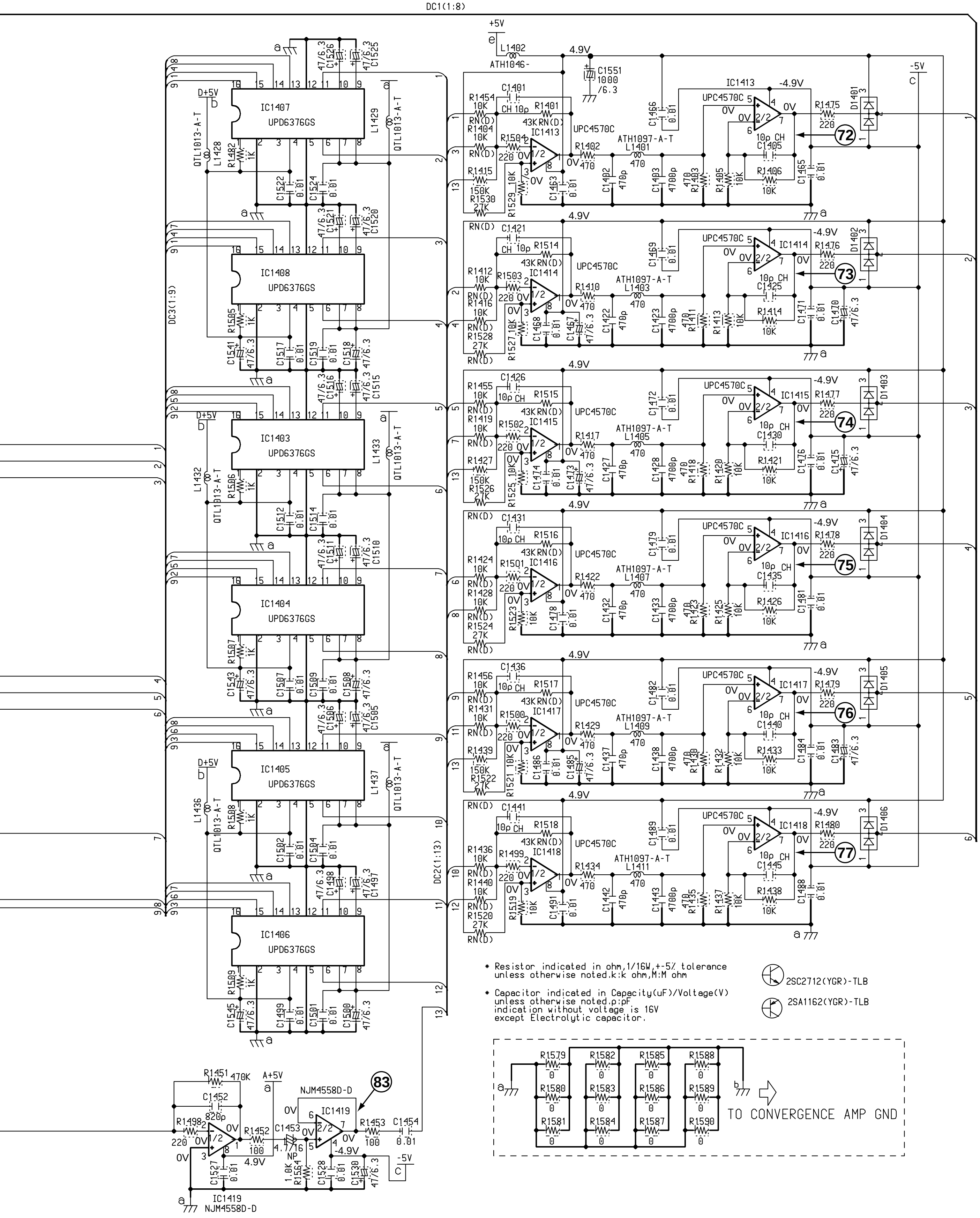
3.30 DIGITAL CONV. ASSY (2/2)



I 2/2

DIGITAL CONV. ASSY
(AWZ6460)
• DIGITAL CONVER
BLOCK

RH
RV
GH
GV
BH
BV
H.V.PARA
CPU_RST
+5V
A+5V
D+5V
-5V
F1401 ATF1189-A-T
F1402 ATF1189-A-T
F1403 ATF1189-A-T
IN
GND
IC1411 NJM4558D-D
IC1412 UPC4570C
IC1410 24LC128P
4.8Vpp
A0
A1
A2
VSS
VCC
WP
SCL
SDA
Q1403 2SJ461
D1409 1SS181-TLB
IC1420 M51952BML-TBB
D1407
L1413 ATH1097-A-T
L1418 QTL1013-A-T
4.9V
-4.9V
0.7V
0V
0-4.9V
I 1/2
CXSTOP
CXOFDET
CXMUTE
CXRESET
CXBUSY
CXACKM
CSDA2
CSCL2
DC4(1:12)
IC1401
CM0006CF
TEST1
XSTOP
XWC
SDAM
SCLM
DVDD
DVSS
XOFDET
XMUTE
XRESET
XBUSY
XACKM
SDAS
SCLS
HBLKIN
PWM1
PWM2
VBLKIN
TEST3
ODDEVEN
RHOUT
GHOUT
BHOUT
NC
RVOUT
GVOUT
BVOUT
DAVSS
SHBIAS
DIVCNT
DAMODE
ROUT
GOUT
BOUT
YMOUT
YSOUT
HBLKOU
WCLK
BCLK
TEST4
TEST5
PLLVDD
PDOUT
PLLVSS
VCOIN
R1
R2
DAREF
DAOUT
DAVDD
(78)
(79)
(80)
(81)
(82)
(71)
CV.R
CV.G
CV.B
CV.BLK
DC5(1:4)
Q1401
C.H.BLK
V.BLK02
DH.BLK
ACSW
IC1421 TC74HC4053AF-TBB
IC1409 TC74HC14AF
IC1402 TLC2932IPW-TBB
L1424 QTL1013-A-T
L1425 QTL1013-A-T
LOGIC VDD
SELECT
VCO OUT
FIN-A
FIN-B
PFD OUT
LOGIC GND
VCO VDD
RBIAS
VCOIN
VCO GND
INHIBIT
PFD INHIBIT

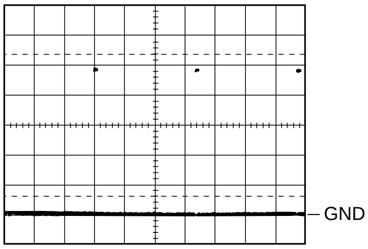

DC1(1:8)
DC2(1:13)
DC3(1:9)
+5V
D+5V
A+5V
-5V
4.9V
-4.9V
IC1407 UPD6376GS
IC1408 UPD6376GS
IC1403 UPD6376GS
IC1404 UPD6376GS
IC1405 UPD6376GS
IC1406 UPD6376GS
IC1413 UPC4570C
IC1414 UPC4570C
IC1415 UPC4570C
IC1416 UPC4570C
IC1417 UPC4570C
IC1418 UPC4570C
IC1419 NJM4558D-D
L1402 ATH1046-
C1551 1000/6.3
ATH1097-A-T
QTL1013-A-T
D1401
D1402
D1403
D1404
D1405
D1406
72
73
74
75
76
77
83
2SC2712(YGR)-TLB
2SA1162(YGR)-TLB
R1579
R1580
R1581
R1582
R1583
R1584
R1585
R1586
R1587
R1588
R1589
R1590
TO CONVERGENCE AMP GND

- Resistor indicated in ohm,1/16W,+-5% tolerance unless otherwise noted.k:k ohm,M:M ohm
- Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 16V except Electrolytic capacitor.

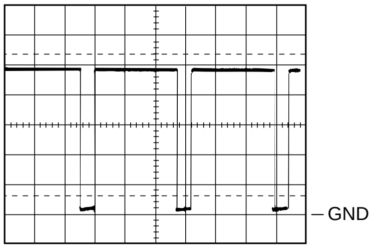
G DIGITAL CONV. ASSY

Input signal
Video signal : EIA full color-bar
Picture quality : Standard
Range :DC range (Unless otherwise noted)

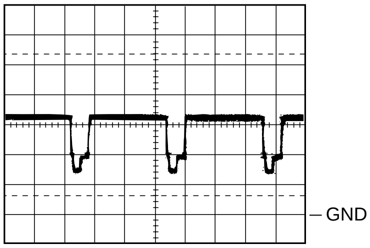
(65) **IC1652 pin 1 (DH. BLK input)**
V: 1V/div. H: 10µsec/div.



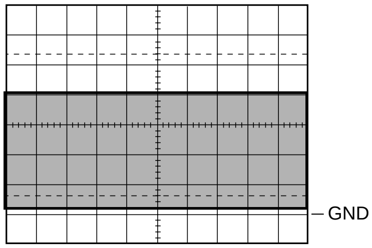
(66) **IC1652 pin 2 (V. BLKØ input)**
V: 1V/div. H: 5msec/div.



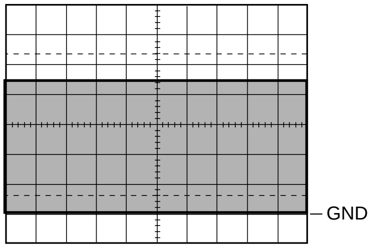
(67) **IC1652 pin 22 (Y input)**
V: 1V/div. H: 20µsec/div.



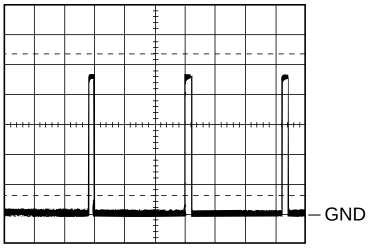
(68) **IC1652 pin 24 (X input)**
V: 1V/div. H: 100µsec/div.



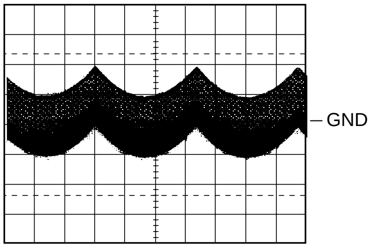
(69) **IC1652 pin 25 (X output)**
V: 1V/div. H: 100µsec/div.



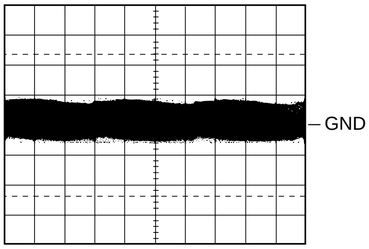
(70) **IC1651 pin 4 (CH. BLK input)**
V: 1V/div. H: 100µsec/div.



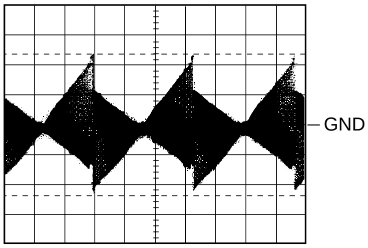
(71) **IC1411 pin 1 (DF output)**
V: 2V/div. H: 5msec/div.



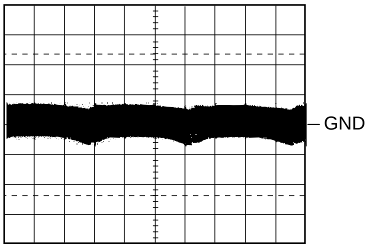
(72) **IC1413 pin 7 (RH output)**
V: 1V/div. H: 5msec/div.



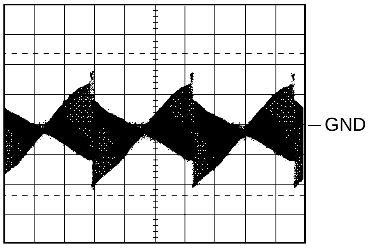
(73) **IC1414 pin 7 (RV output)**
V: 1V/div. H: 5msec/div.



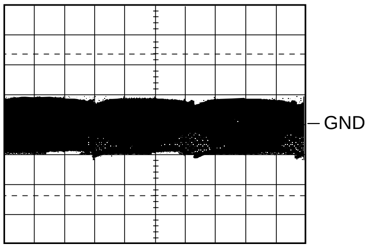
(74) **IC1415 pin 7 (GH output)**
V: 1V/div. H: 5msec/div.



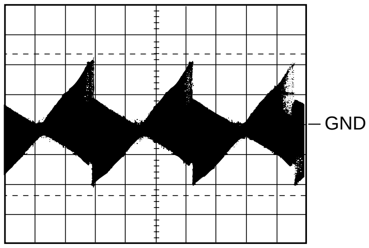
(75) **IC1416 pin 7 (GV output)**
V: 1V/div. H: 5msec/div.



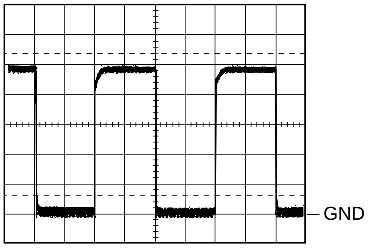
(76) **IC1417 pin 7 (BH output)**
V: 1V/div. H: 5msec/div.



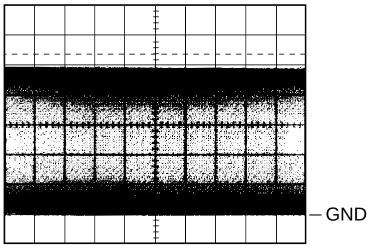
(77) **IC1418 pin 7 (BV output)**
V: 1V/div. H: 5msec/div.



(78) **IC1401 pin 27 (WCLK for D/A)**
V: 1V/div. H: 1µsec/div.

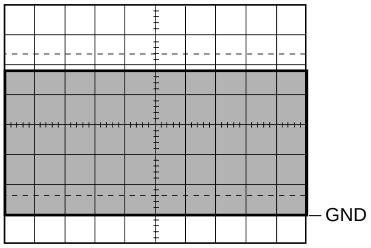


(79) **IC1401 pin 28 (BCLK for D/A)**
V: 1V/div. H: 1µsec/div.

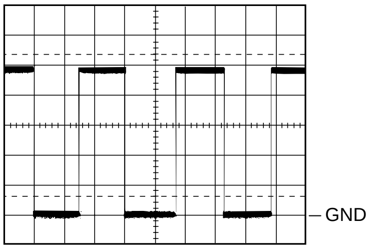


I 2/2 DIGITAL CONV. ASSY (2/2)

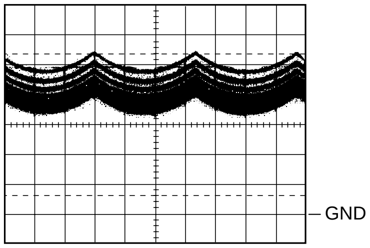
⑧⓪ **IC1401 pin 29 (PLL CLK (35MHz))**
V: 1V/div. H: 1μsec/div.



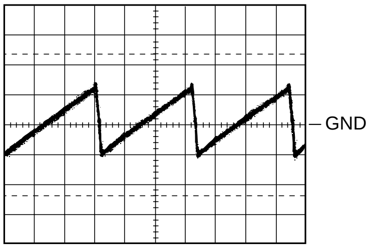
⑧① **IC1401 pin 30**
(Output after PLL division)
V: 1V/div. H: 1μsec/div.



⑧② **IC1401 pin 38 (DF output)**
V: 0.5V/div. H: 5msec/div.



⑧③ **IC1419 pin 7 (For H pulse cancel)**
V: 1V/div. H: 10μsec/div.



IC1401 (CM0006CF)

Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	4.9	21	0	41	1.2	61	4.9
2	4.85	22	0	42	0	62	4.9
3	0	23	0	43	4.9	63	4.9
4	4.8Vpp	24	0	44	4.9Vpp	64	4.9
5	4.8Vpp	25	0	45	4.9Vpp	65	4.9
6	4.9	26	4.6Vpp	46	4.9Vpp	66	4.9
7	0	27	4.8Vpp	47	4.9	67	0
8	4.85	28	4.8Vpp	48	0	68	4.8
9	4.8	29	4.8Vpp	49	0	69	4.9
10	4.8	30	4.8Vpp	50	0	70	4.9
11	4.8Vpp	31	4.9	51	4.9	71	4.9
12	4.8Vpp	32	0	52	0	72	4.9
13	4.8Vpp	33	0	53	0	73	4.9
14	4.8Vpp	34	0	54	0	74	4.9
15	0	35	1.2	55	0	75	4.9
16	2.4	36	0	56	0	76	4.9
17	2.4	37	3.2	57	4.9	77	4.9
18	4.9Vpp	38	1Vpp	58	4.9Vpp	78	4.9
19	4.9	39	4.9	59	4.9Vpp	79	4.9
20	4.9	40	0	60	4.9Vpp	80	4.9

IC1421
(TC74HC4053AF)

Pin No.	Voltage (V)
1	4.8Vpp
2	4.8Vpp
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	4.8Vpp
13	4.8Vpp
14	4.8Vpp
15	4.8Vpp
16	4.9

IC1403,IC1405,
IC1407
(UPD6376GS)

Pin No.	Voltage (V)
1	4.85
2	0
3	0
4	4.9
5	0
6	1.6
7	4.9
8	4.9
9	2.1
10	2.1
11	1.6
12	0
13	2.4
14	2.1
15	2.2
16	2.1

IC1409
(TC74HC14AF)

Pin No.	Voltage (V)
1	4.8Vpp
2	4.8Vpp
3	4.8Vpp
4	4.9Vpp
5	4.9Vpp
6	4.9Vpp
7	0
8	0
9	0
10	4.9Vpp
11	4.9Vpp
12	4.9Vpp
13	4.9Vpp
14	4.9

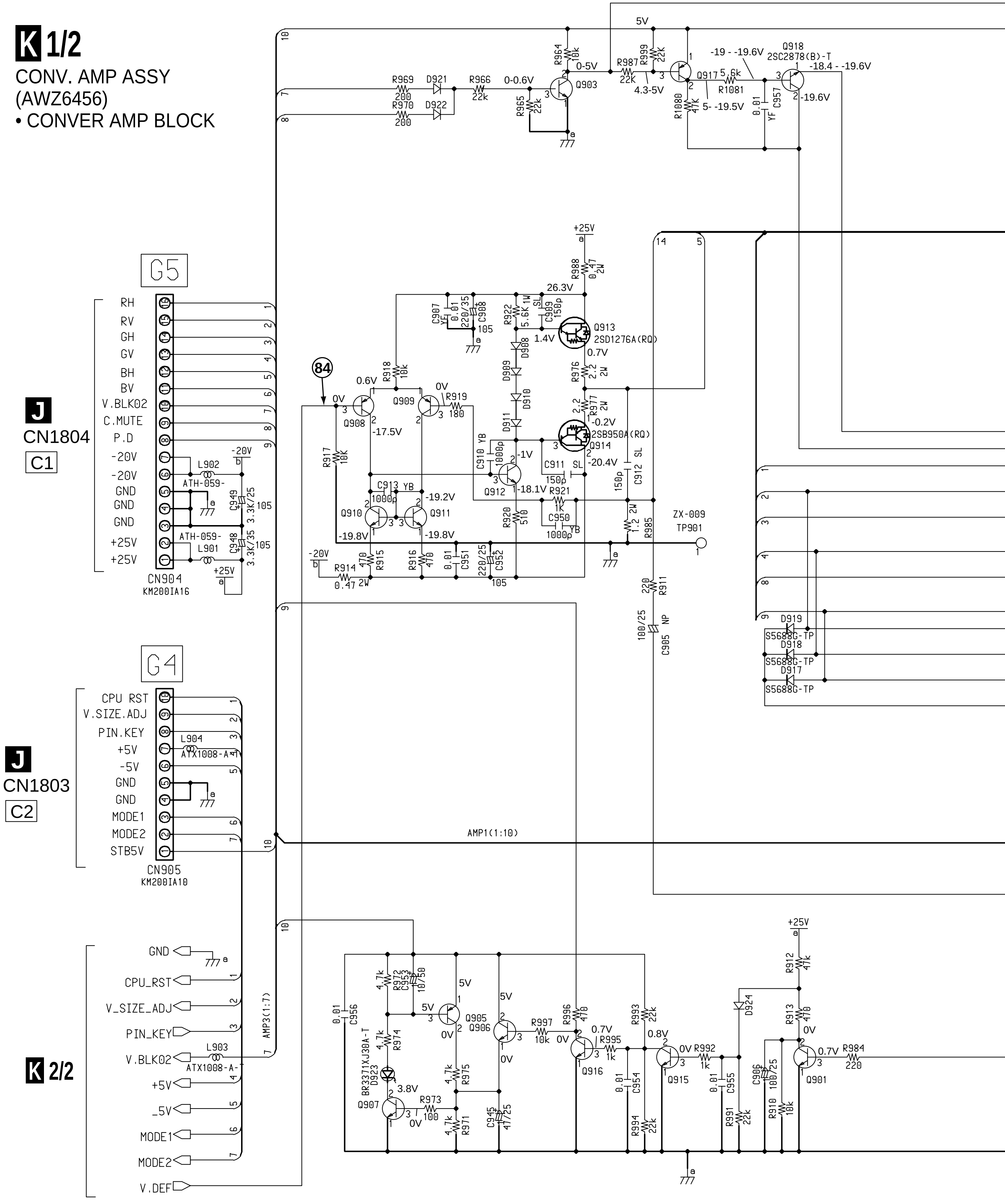
IC1402
(TLC2932IPW)

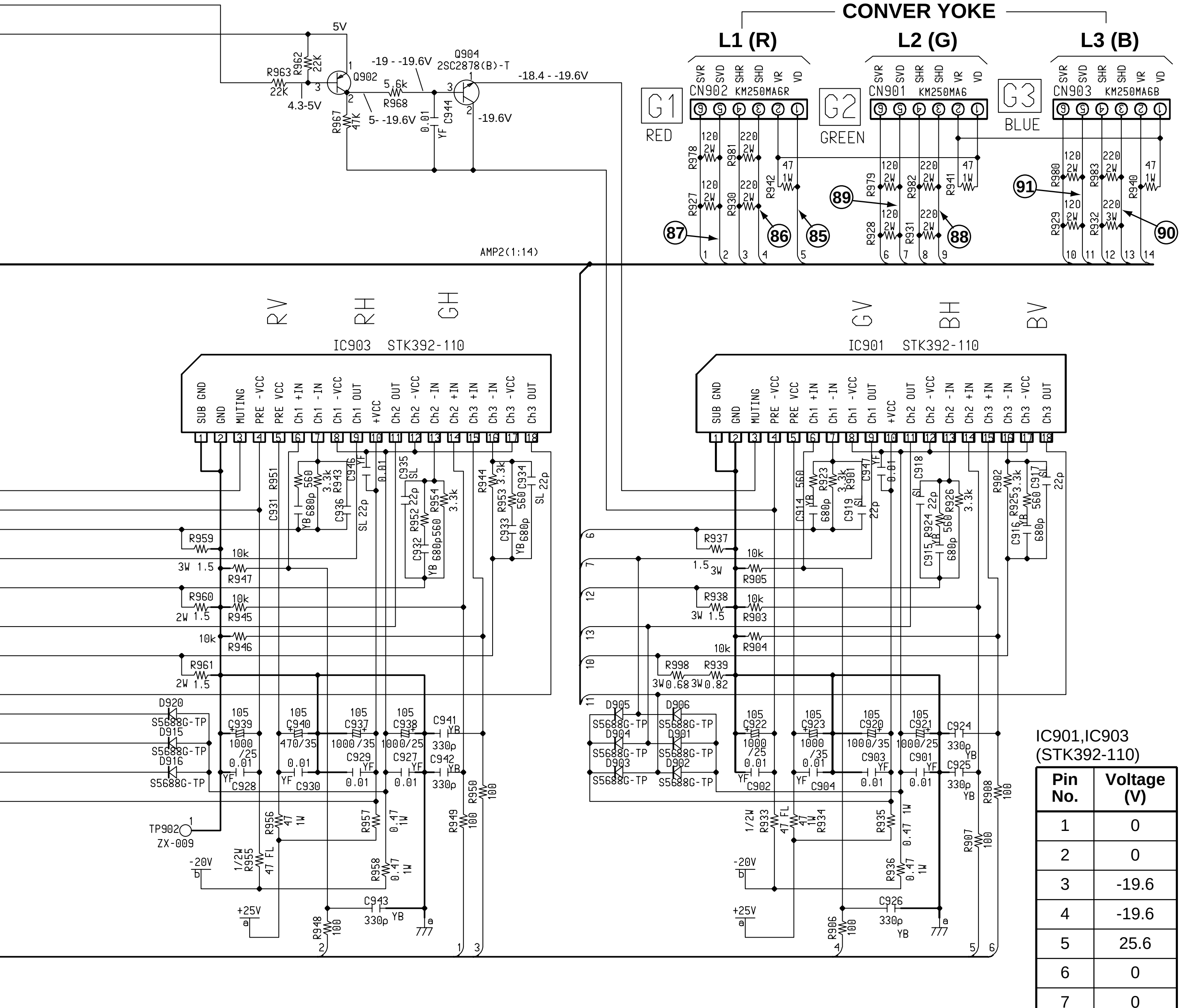
Pin No.	Voltage (V)
1	4.9
2	0
3	4.8Vpp
4	4.9Vpp
5	4.9Vpp
6	1.8
7	0
8	0
9	0
10	0
11	0
12	1.8
13	3.6
14	4.9

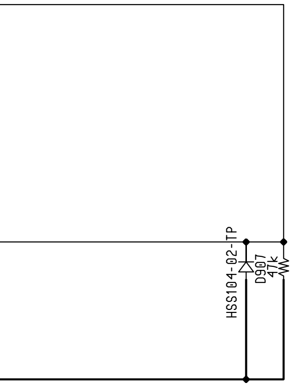
3.31 CONV. AMP ASSY (1/2)

K 1/2

CONV. AMP ASSY
(AWZ6456)
- CONVER AMP BLOCK


J
CN1804
C1
G5
RH
RV
GH
GV
BH
BV
V.BLK02
C.MUTE
P.D
-20V
-20V
GND
GND
GND
+25V
+25V
CN904
KM200IA16
L902
ATH-059-
ATH-059-
L901
C949
3.3K/25
105
C948
3.3K/35
105
J
CN1803
C2
G4
CPU RST
V.SIZE.ADJ
PIN.KEY
+5V
-5V
GND
GND
MODE1
MODE2
STB5V
CN905
KM200IA10
L904
ATX1008-A-T
K 2/2
GND
CPU_RST
V_SIZE_ADJ
PIN_KEY
V.BLK02
L903
ATX1008-A-T
+5V
_5V
MODE1
MODE2
V.DEF
AMP3(1:7)
AMP1(1:10)
84
R969 200
D921
R970 200
D922
R966 22k
0-0.6V
R964 10k
0-5V
R965 22k
Q903
5V
R987 22k
R999 22k
4.3-5V
Q917
R1080 47k
5- -19.5V
-19 - -19.6V
5.6k R1081
0.01 C957 YF
Q918
2SC2878(B)-T
-18.4 - -19.6V
-19.6V
+25V
R988 0.47 2W
26.3V
C907 YF 0.01
220/35 C908 105
R922 5.6K 1W
C909 SL 150p
Q913
2SD1276A(RQ)
1.4V
D908
D909
D910
D911
0.7V
R976 2.2 2W
R977 2.2 2W
-0.2V
2SB950A(RQ)
Q914
-20.4V
R918 10k
0.6V
0V
Q908
-17.5V
0V
Q909
R919 180
C910 YB 1000p
-1V
Q912
-18.1V
C911 150p SL
R921 1k
C950 1000p YB
150p C912 SL
R985 1.2 2W
ZX-009
TP901
R917 10k
C913 YB 1000p
-19.2V
Q910
Q911
-19.8V
-19.8V
R920 510
-20V
R914 0.47 2W
R915 470
R916 470
0.01 C951
220/25 C952 105
R911 220
100/25 C905 NP
14
5
D919
S5688G-TP
D918
S5688G-TP
D917
S5688G-TP
0.01 C956
4.7k R972
C953 10/50
R974 4.7k
BR3371XJ30A-T D923
5V
5V
Q905
Q906
0V
5V
3.8V
Q907
R973 100
0V
R975 4.7k
R971 4.7k
C945 47/25
0V
R997 10k
0V
R996 470
0.7V
R995 1k
Q916
0.01 C954
R994 22k
R993 22k
0.8V
0V R992 1k
Q915
0.01 C955
R991 22k
D924
C906 100/25
R910 10k
+25V
R912 47k
R913 470
0V
0.7V
R984 220
Q901
1
2
3
4


CONVER YOKE
L1 (R)
L2 (G)
L3 (B)
G1
RED
G2
GREEN
G3
BLUE
CN902 KM250MA6R
CN901 KM250MA6
CN903 KM250MA6B
SVR SVD SHR SHD VR VD
5V
R962 22K
R963 22K
Q902
4.3-5V
-19 - -19.6V
Q904 2SC2878(B)-T
5.6k R968
5- -19.6V
R967 47K
C944 0.01 YF
-18.4 - -19.6V
-19.6V
AMP2(1:14)
87
86
85
89
88
91
90
RV RH GH
GV BH BV
IC903 STK392-110
IC901 STK392-110
SUB GND
GND
MUTING
PRE -VCC
PRE VCC
Ch1 +IN
Ch1 -IN
Ch1 -VCC
Ch1 OUT
+VCC
Ch2 OUT
Ch2 -VCC
Ch2 -IN
Ch2 +IN
Ch3 +IN
Ch3 -IN
Ch3 -VCC
Ch3 OUT
D920 S5688G-TP
D915 S5688G-TP
D916 S5688G-TP
D905 D906 D904 D901 D903 D902 S5688G-TP
TP902 ZX-009
-20V
+25V
C943 330p YB
C926 330p YB
R948 100
R906 100


HSS104-02-TP
D907
47k
R909

Notes
1. RESISTERS
(RS):METAL OXIDE FILM RESISTER
(RT):CEMENT RESISTER
(RN):METAL FILM RESISTER
(FL):NON FLAMMABLE RESISTER
THE OTHERS:CARBONFILM RESISTER (1/4 W)
Figures in pharenttheses
show the rated wattage.
Those unspecified ones are of 1/4W.
K:KΩ ,M:MΩ ,Unspecified ones are of Ω

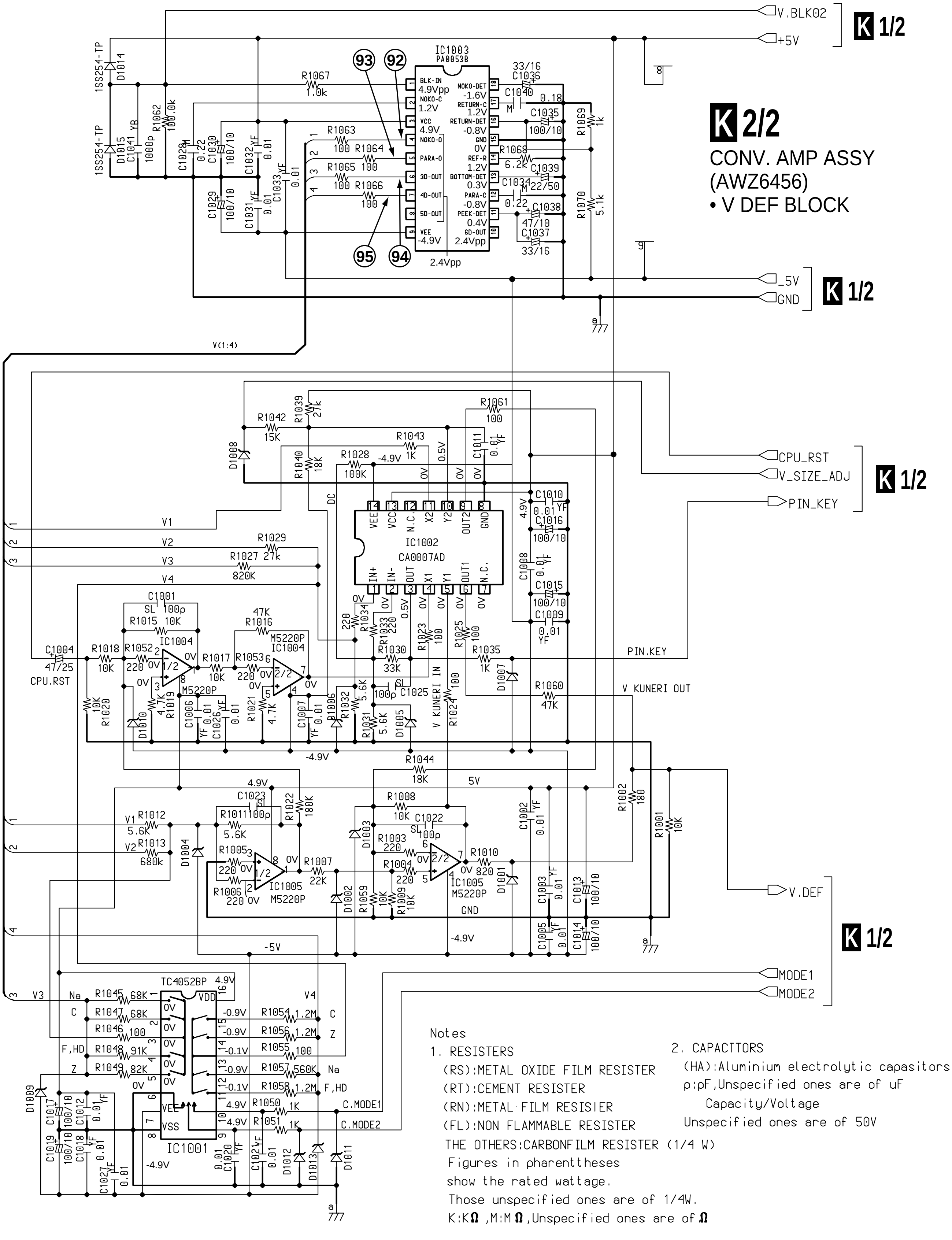
2. CAPACITORS
(HA):Aluminium electrolytic capasitors
p:pF,Unspecified ones are of uF
Capacity/Voltage
Unspecified ones are of 50V

IC901,IC903
(STK392-110)

Pin No.	Voltage (V)
1	0
2	0
3	-19.6
4	-19.6
5	25.6
6	0
7	0
8	-20.3
9	0
10	26.1
11	0
12	-20.3
13	0
14	0
15	0
16	0
17	-20.3
18	0

3.32 CONV. AMP ASSY (2/2)

K 2/2
CONV. AMP ASSY
(AWZ6456)
• V DEF BLOCK


A
B
C
D
V.BLK02
+5V
K 1/2
IC1003
PA0053B
BLK-IN 4.9Vpp
NOKO-C 1.2V
VCC 4.9V
NOKO-O
PARA-O
3D-OUT
4D-OUT
5D-OUT
VEE -4.9V
NOKO-DET -1.6V
RETURN-C 1.2V
RETURN-DET -0.8V
GND 0V
REF-R 1.2V
BOTTOM-DET 0.3V
PARA-C -0.8V
PEEK-DET 0.4V
6D-OUT 2.4Vpp
2.4Vpp
93
92
95
94
R1067 1.0k
R1063 100
R1064 100
R1065 100
R1066 100
R1062 100.0k
R1068 6.2k
R1069 1k
R1070 5.1k
C1036 33/16
C1040 0.18
C1035 100/10
C1039 22/50
C1034 0.22
C1038 47/10
C1037 33/16
D1014 1SS254-TP
D1015 1SS254-TP
C1041 1000p
C1028 0.22
C1030 100/10
C1032 0.01
C1033 0.01
C1029 100/10
C1031 0.01
_5V
GND
V(1:4)
CPU_RST
V_SIZE_ADJ
PIN_KEY
IC1002
CA0007AD
VEE VCC N.C. X2 Y2 OUT2 GND
IN+ IN- OUT X1 Y1 OUT1 N.C.
R1039 27k
R1042 15k
R1043 1K
R1040 18K
R1028 100K
R1061 100
C1011 0.01
C1010 0.01
C1016 100/10
C1008 0.01
C1015 100/10
C1009 0.01
D1008
V1
V2
V3
V4
R1029 27k
R1027 820K
C1001 SL 100p
R1015 10K
IC1004 M5220P
R1016 47K
C1004 47/25
CPU.RST
R1018 10K
R1052 220
R1017 10K
R1053 220
R1019 4.7K
R1020 10K
D1010
C1006 0.01
C1026 0.01
R1021 4.7K
C1007 0.01
D1006
R1032 5.6K
R1031 5.6K
D1005
R1034 220
R1033 220
R1030 33K
C1025 100p
R1023 100
R1025 100
R1024 100
V KUNERI IN
R1035 1K
D1007
R1060 47K
PIN.KEY
V KUNERI OUT
-4.9V
R1044 18K
5V
4.9V
C1023 100p
R1011 5.6K
R1022 180K
R1012 5.6K
R1013 680k
D1004
R1005 220
R1006 220
IC1005 M5220P
R1007 22K
D1002
R1008 10K
C1022 100p
D1003
R1003 220
R1004 220
R1059 10K
R1009 10K
R1010 820
D1001
C1002 0.01
R1002 180
R1001 10K
C1003 0.01
C1013 100/10
C1005 0.01
C1014 100/10
V.DEF
GND
-5V
MODE1
MODE2
TC4052BP
IC1001
VDD VEE VSS
R1045 68K
R1047 68K
R1046 100
R1048 91K
R1049 82K
R1054 1.2M
R1056 1.2M
R1055 100
R1057 560K
R1058 1.2M
R1050 1K
R1051 1K
Na C F,HD Z
C.MODE1
C.MODE2
D1009
C1017 100/10
C1012 0.01
C1019 100/10
C1018 0.01
C1027 0.01
C1020 0.01
C1021 0.01
D1012
D1013
D1011

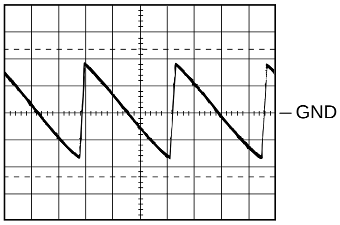
Notes
1. RESISTERS
(RS):METAL OXIDE FILM RESISTER
(RT):CEMENT RESISTER
(RN):METAL FILM RESISIER
(FL):NON FLAMMABLE RESISTER
THE OTHERS:CARBONFILM RESISTER (1/4 W)
Figures in pharenttheses
show the rated wattage.
Those unspecified ones are of 1/4W.
K:KΩ ,M:MΩ ,Unspecified ones are of Ω

2. CAPACITTORS
(HA):Aluminium electrolytic capasitors
p:pF,Unspecified ones are of uF
Capacity/Voltage
Unspecified ones are of 50V

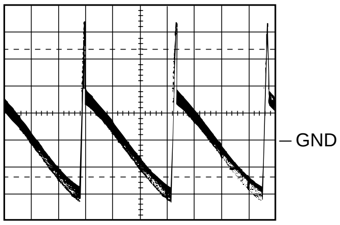
K CONV. AMP ASSY

Input signal
Video signal : EIA full color-bar
Picture quality : Standard
Range :DC range (Unless otherwise noted)

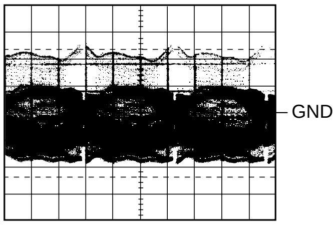
(84) Q908 Base (V. DEF input)
V: 0.5V/div. H: 5msec/div.



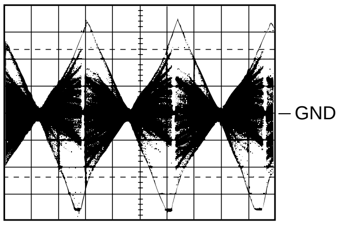
(85) CN902 pin 1 (V. DEF output)
V: 5V/div. H: 5msec/div.



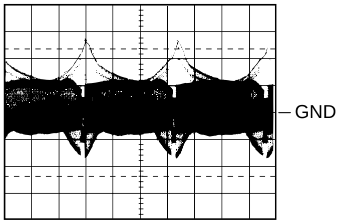
(86) CN902 pin 3 (RH input)
V: 5V/div. H: 5msec/div.



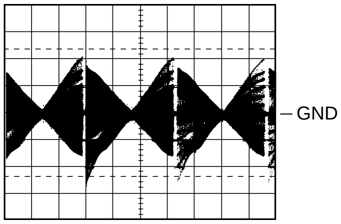
(87) CN902 pin 5 (RV output)
V: 5V/div. H: 5msec/div.



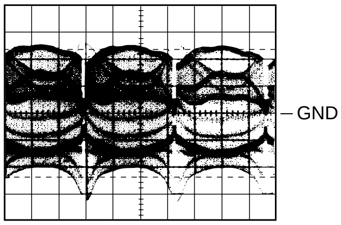
(88) CN901 pin 3 (GH output)
V: 5V/div. H: 5msec/div.



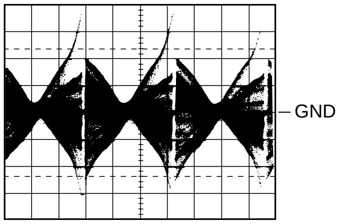
(89) CN901 pin 5 (GV output)
V: 5V/div. H: 5msec/div.



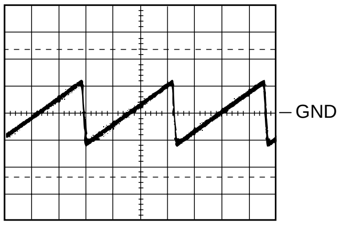
(90) CN903 pin 3 (BH output)
V: 5V/div. H: 5msec/div.



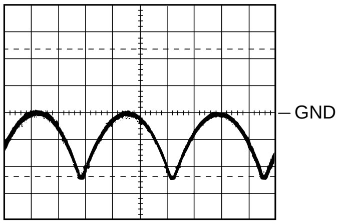
(91) CN903 pin 5 (BV output)
V: 5V/div. H: 5msec/div.



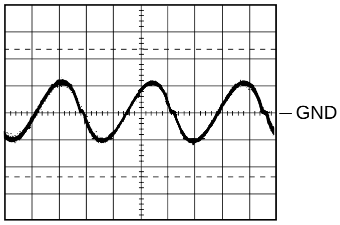
(92) IC1003 pin 4 (V1 output)
V: 1V/div. H: 5msec/div.



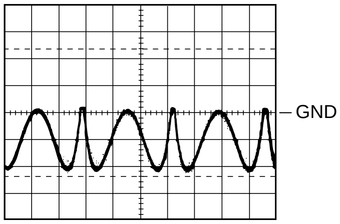
(93) IC1003 pin 5 (V2 output)
V: 1V/div. H: 5msec/div.



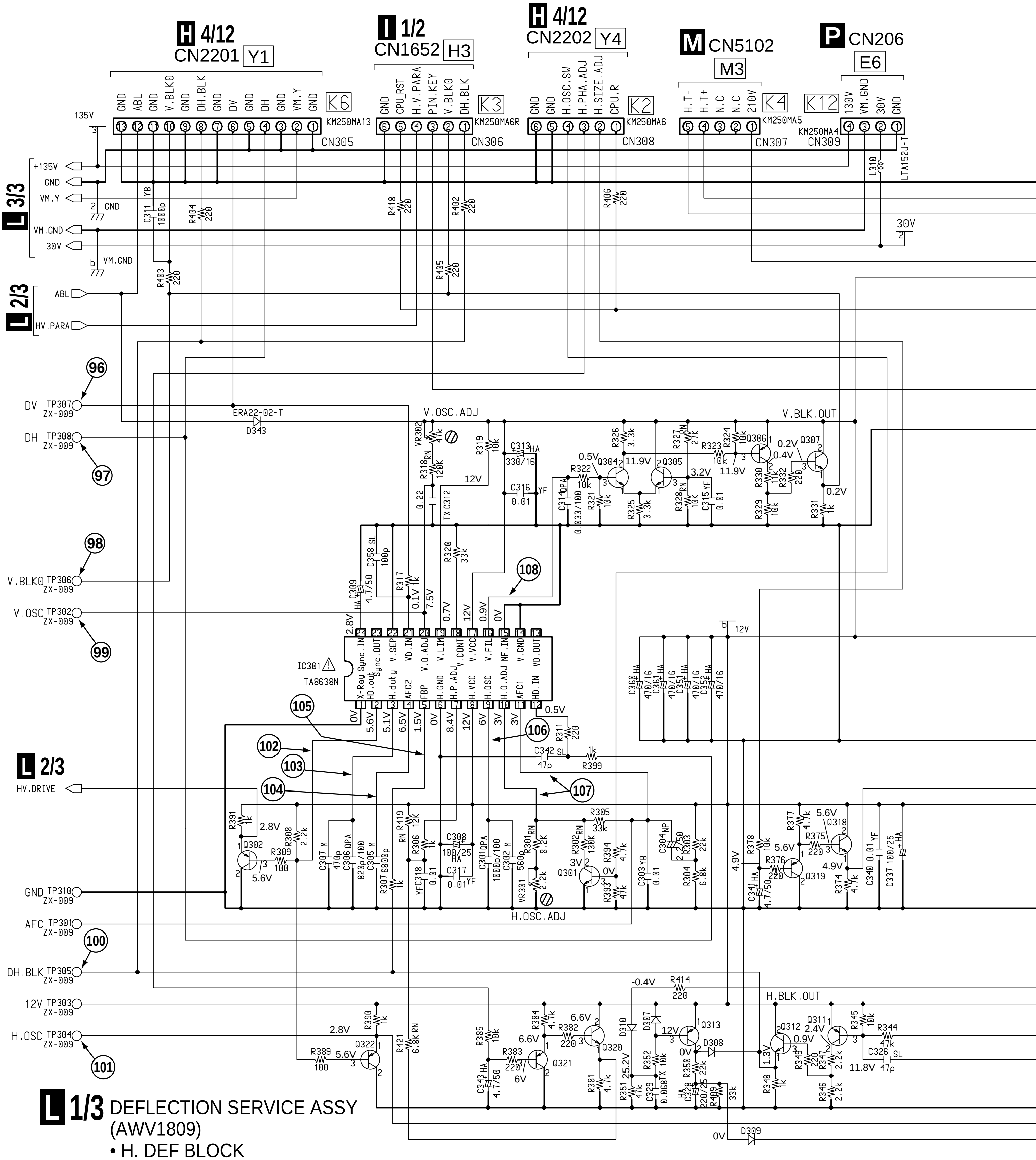
(94) IC1003 pin 6 (V3 output)
V: 1V/div. H: 5msec/div.



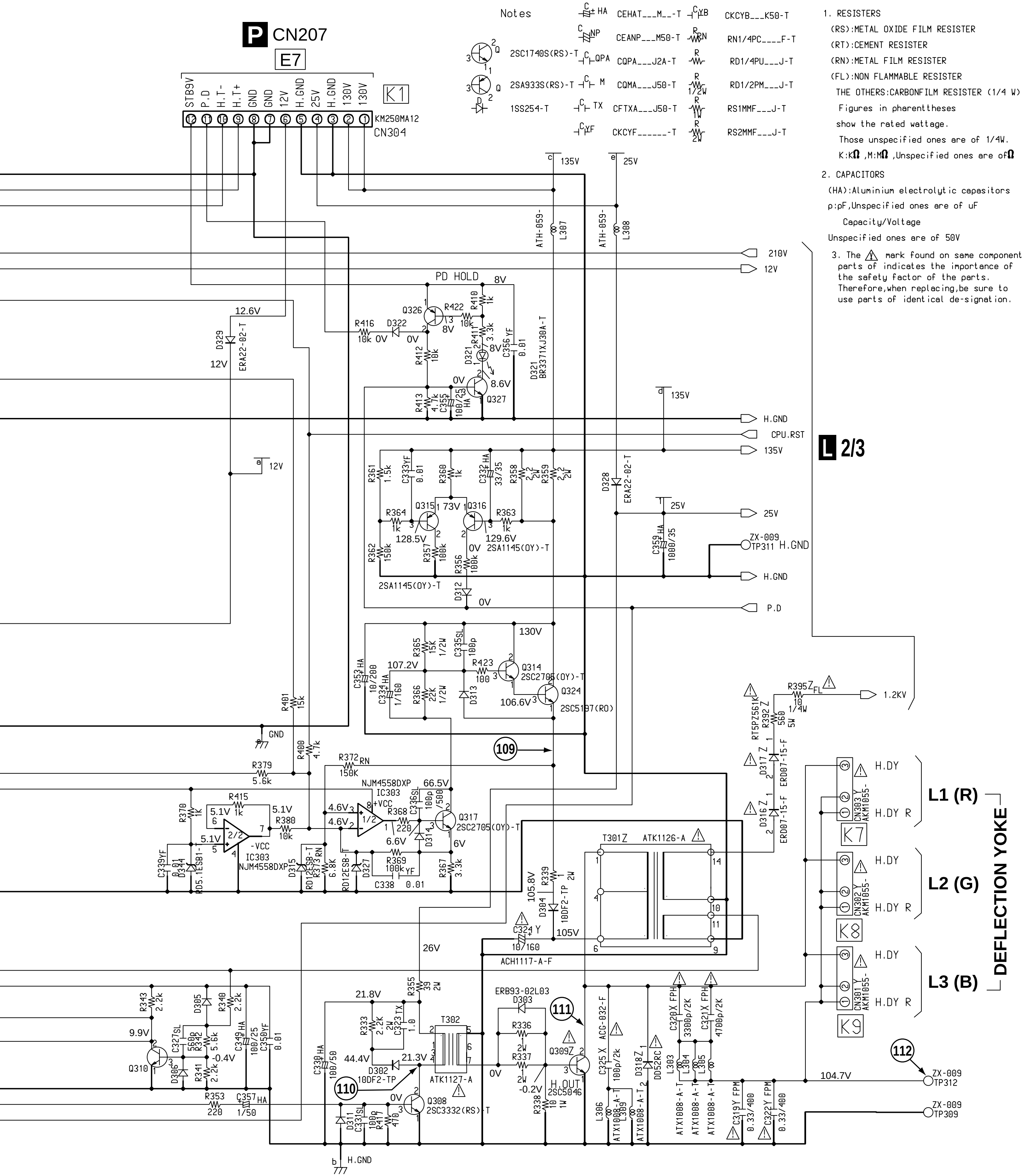
(95) IC1003 pin 7 (V4 output)
V: 1V/div. H: 5msec/div.



3.33 DEFLECTION SERVICE ASSY (1/3)


H 4/12
CN2201 Y1
I 1/2
CN1652 H3
H 4/12
CN2202 Y4
M CN5102
M3
P CN206
E6
K6
K3
K2
K4
K12
GND ABL GND V.BLK0 GND DH.BLK GND DV GND DH GND VM.Y GND
KM250MA13 CN305
GND CPU_RST H.V.PARA PIN.KEY V.BLK0 DH.BLK
KM250MA6R CN306
GND GND H.OSC.SW H.PHA.ADJ H.SIZE.ADJ CPU.R
KM250MA6 CN308
H.T- H.T+ N.C N.C 210V
KM250MA5 CN307
130V VM.GND 30V GND
KM250MA4 CN309
L310 LTA152J-T
135V
+135V
GND
VM.Y
VM.GND
30V
L 3/3
L 2/3
ABL
HV.PARA
DV TP307 ZX-009
DH TP308 ZX-009
V.BLK0 TP306 ZX-009
V.OSC TP302 ZX-009
L 2/3
HV.DRIVE
GND TP310 ZX-009
AFC TP301 ZX-009
DH.BLK TP305 ZX-009
12V TP303 ZX-009
H.OSC TP304 ZX-009
96
97
98
99
100
101
102
103
104
105
106
107
108
ERA22-02-T D343
V.OSC.ADJ
V.BLK.OUT
H.OSC.ADJ
H.BLK.OUT
IC301 TA8638N
X-Ray Sync.IN Sync.OUT V.SEP VD.IN V.O.ADJ V.LIM V.CONT V.VCC V.FIL NF.IN V.GND VD.OUT
HD.out H.duty AFC2 FBP H.GND H.P.ADJ H.VCC H.OSC H.O.ADJ AFC1 HD.IN
Q302 Q304 Q305 Q306 Q307 Q301 Q318 Q319 Q320 Q321 Q322 Q311 Q312 Q313
D307 D308 D309 D310
VR301 VR302
12V
0.5V
0.2V
2.8V
5.6V
4.9V
-0.4V
R414 220
11.8V

L 1/3 DEFLECTION SERVICE ASSY
(AWV1809)
- H. DEF BLOCK



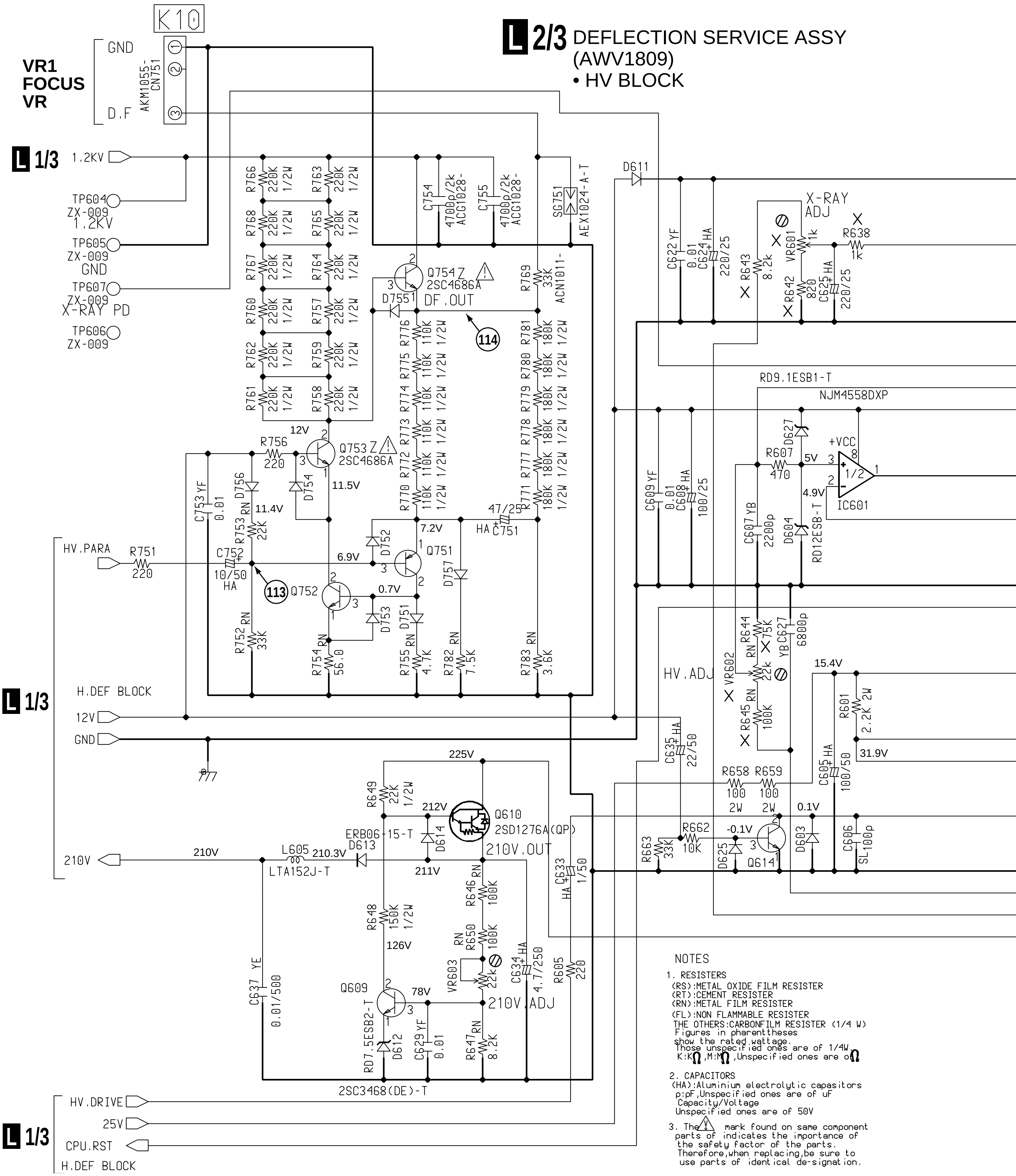
Notes
2SC1740S(RS)-T
2SA933S(RS)-T
1SS254-T
HA CEHAT___M__-T
NP CEANP___M50-T
QPA CQPA___J2A-T
M CQMA___J50-T
TX CFTXA___J50-T
YF CKCYF______-T
YB CKCYB___K50-T
RN RN1/4PC____F-T
RD1/4PU___J-T
1/2W RD1/2PM___J-T
1W RS1MMF___J-T
2W RS2MMF___J-T
P CN207
E7
K1
STB9V P.D H.T- H.T+ GND GND 12V H.GND 25V H.GND 130V 130V
KM250MA12
CN304
135V
25V
ATH-059- L307
ATH-059- L308
210V
12V
PD HOLD
8V
Q326
R422 10k
R410 1k
R411 3.3k
R416 10k
D322
0V
R412 10k
D321 BR3371XJ30A-T
C356 YF 0.01
12.6V
D329 ERA22-02-T
12V
0V
8.6V
Q327
R413 4.7k
C355 100/25 HA
135V
H.GND
CPU.RST
135V
L 2/3
12V
R361 1.5k
C333 YF 0.01
R360 1k
C332 HA 33/35
R358 2W
R359 2W
Q315
73V
Q316
R364 1k
R363 1k
128.5V
129.6V
0V
2SA1145(OY)-T
R362 150k
R357 100k
R356 100k
2SA1145(OY)-T
D312
0V
D328 ERA22-02-T
25V
25V
C359 HA 1000/35
ZX-009 TP311 H.GND
H.GND
P.D
130V
R365 15K 1/2W
C335 SL 100p
R423 100
Q314 2SC2705(OY)-T
Q324 2SC5187(RO)
107.2V
106.6V
C353 HA 10/200
C334 HA 1/160
R366 22K 1/2W
D313
R401 15k
GND
109
R395 FL 10 1/4W
1.2KV
RT5PZ561K
R392 560 5W
D317 ERD07-15-F
D316 ERD07-15-F
R400 4.7k
R379 5.6k
R372 RN 150K
NJM4558DXP IC303
66.5V
+VCC
C336 SL 100p /500
R415 1k
5.1V
R370 1k
R380 10k
4.6V
R368 220
Q317 2SC2705(OY)-T
D314
6.6V
6V
R369 100k
YF
C338 0.01
R367 3.3k
-VCC
IC303 NJM4558DXP
C339 YF 0.01
D344 RD5.1ESB1-T
D315 RD12ESB-T
R373 RN 6.8K
D327 RD12ESB-T
T301 ATK1126-A
105.8V
R339 2W
D304 10DF2-TP
C324 Y 10/160
105V
ACH1117-A-F
26V
H.DY
H.DY R
CN303 Y AKM1055-
K7
L1 (R)
CN302 Y AKM1055-
K8
L2 (G)
CN301 Y AKM1055-
K9
L3 (B)
DEFLECTION YOKE
R343 2.2k
D305
R340 2.2k
9.9V
C327 SL 560p
R342 5.6k
C349 HA 100/25
C350 YF 0.01
-0.4V
Q310
D306
R341 2.2k
R353 220
C357 HA 1/50
21.8V
R355 39 2W
R333 2.2K 2W
C323 TX 1.0
T302
44.4V
21.3V
D302 10DF2-TP
ATK1127-A
110
0V
Q308 2SC3332(RS)-T
D311
C331 SL 100p
R417 470
C330 HA 100/50
ERB93-02L03 D303
R336 2W
R337 2W
111
0V
-0.2V
Q309 H.OUT 2SC5046
R338 10 1W
C325 X 100p/2k
ACC-032-F
D318 DD52RC
C320 X FPH 3300p/2K
C321 X FPH 4700p/2K
L303 L304 L305
L306 ATX1008-A-T
L309 ATX1008-A-T
ATX1008-A-T ATX1008-A-T ATX1008-A-T
C319 Y FPH 0.33/400
C322 Y FPH 0.33/400
104.7V
112
ZX-009 TP312
ZX-009 TP309
b H.GND

1. RESISTERS
 (RS):METAL OXIDE FILM RESISTER
 (RT):CEMENT RESISTER
 (RN):METAL FILM RESISTER
 (FL):NON FLAMMABLE RESISTER
 THE OTHERS:CARBONFILM RESISTER (1/4 W)
 Figures in pharenttheses
 show the rated wattage.
 Those unspecified ones are of 1/4W.
 K:KΩ ,M:MΩ ,Unspecified ones are ofΩ

2. CAPACITORS
 (HA):Aluminium electrolytic capasitors
 p:pF,Unspecified ones are of uF
 Capacity/Voltage
 Unspecified ones are of 50V

3. The ⚠ mark found on same component parts of indicates the importance of the safety factor of the parts. Therefore,when replacing,be sure to use parts of identical de-signation.

3.34 DEFLECTION SERVICE ASSY (2/3)


K10
L 2/3 DEFLECTION SERVICE ASSY
(AWV1809)
• HV BLOCK
VR1
FOCUS
VR
GND
D.F
AKM1055-
CN751
L 1/3
1.2KV
TP604
ZX-009
1.2KV
TP605
ZX-009
GND
TP607
ZX-009
X-RAY PD
TP606
ZX-009
R766 220K 1/2W
R763 220K 1/2W
R768 220K 1/2W
R765 220K 1/2W
R767 220K 1/2W
R764 220K 1/2W
R760 220K 1/2W
R757 220K 1/2W
R762 220K 1/2W
R759 220K 1/2W
R761 220K 1/2W
R758 220K 1/2W
C754 4700p/2k ACG1028-
C755 4700p/2k ACG1028-
SG751 AEX1024-A-T
Q754 2SC4686A
D7551
DF.OUT
114
R769 33K ACN1011-
R776 110K 1/2W
R775 110K 1/2W
R774 110K 1/2W
R773 110K 1/2W
R772 110K 1/2W
R770 110K 1/2W
R781 180K 1/2W
R780 180K 1/2W
R779 180K 1/2W
R778 180K 1/2W
R777 180K 1/2W
R771 180K 1/2W
12V
R756 220
Q753 2SC4686A
11.5V
D756
D754
11.4V
C753 YF 0.01
R753 RN 22K
47/25
HA C751
7.2V
D752
Q751
6.9V
HV.PARA
R751 220
C752 10/50 HA
113
Q752
0.7V
D757
D753
D751
R752 RN 33K
R754 RN 56.0
R755 RN 4.7K
R782 RN 7.5K
R783 RN 3.6K
L 1/3
H.DEF BLOCK
12V
GND
225V
R649 22K 1/2W
212V
Q610 2SD1276A(QP)
ERB06-15-T
D613
D614
210V.OUT
210V
210V
L605
LTA152J-T
210.3V
211V
R646 RN 100K
R648 150K 1/2W
126V
R650 RN 100K
VR603 22k
C634 HA 4.7/250
C633 HA 1/50
R605 220
C637 YE 0.01/500
Q609
78V
210V.ADJ
RD7.5ESB2-T
D612
C629 YF 0.01
R647 RN 8.2K
2SC3468(DE)-T
L 1/3
HV.DRIVE
25V
CPU.RST
H.DEF BLOCK
D611
C622 YF 0.01
C624 HA 220/25
X-RAY ADJ
R643 8.2k
VR601 1k
R638 1k
R642 820
C625 HA 220/25
RD9.1ESB1-T
NJM4558DXP
C609 YF 0.01
C608 HA 100/25
D627
+VCC
R607 470
5V
1/2
IC601
4.9V
C607 YB 2200p
D604
RD12ESB-T
R644 RN 75K
C627 YB 6800p
HV.ADJ
VR602 22k
15.4V
R601 2.2K 2W
R645 RN 100K
C635 HA 22/50
C605 HA 100/50
31.9V
R658 100 2W
R659 100 2W
0.1V
R662 10K
-0.1V
R663 33K
D625
Q614
D603
C606 SL 100p

NOTES

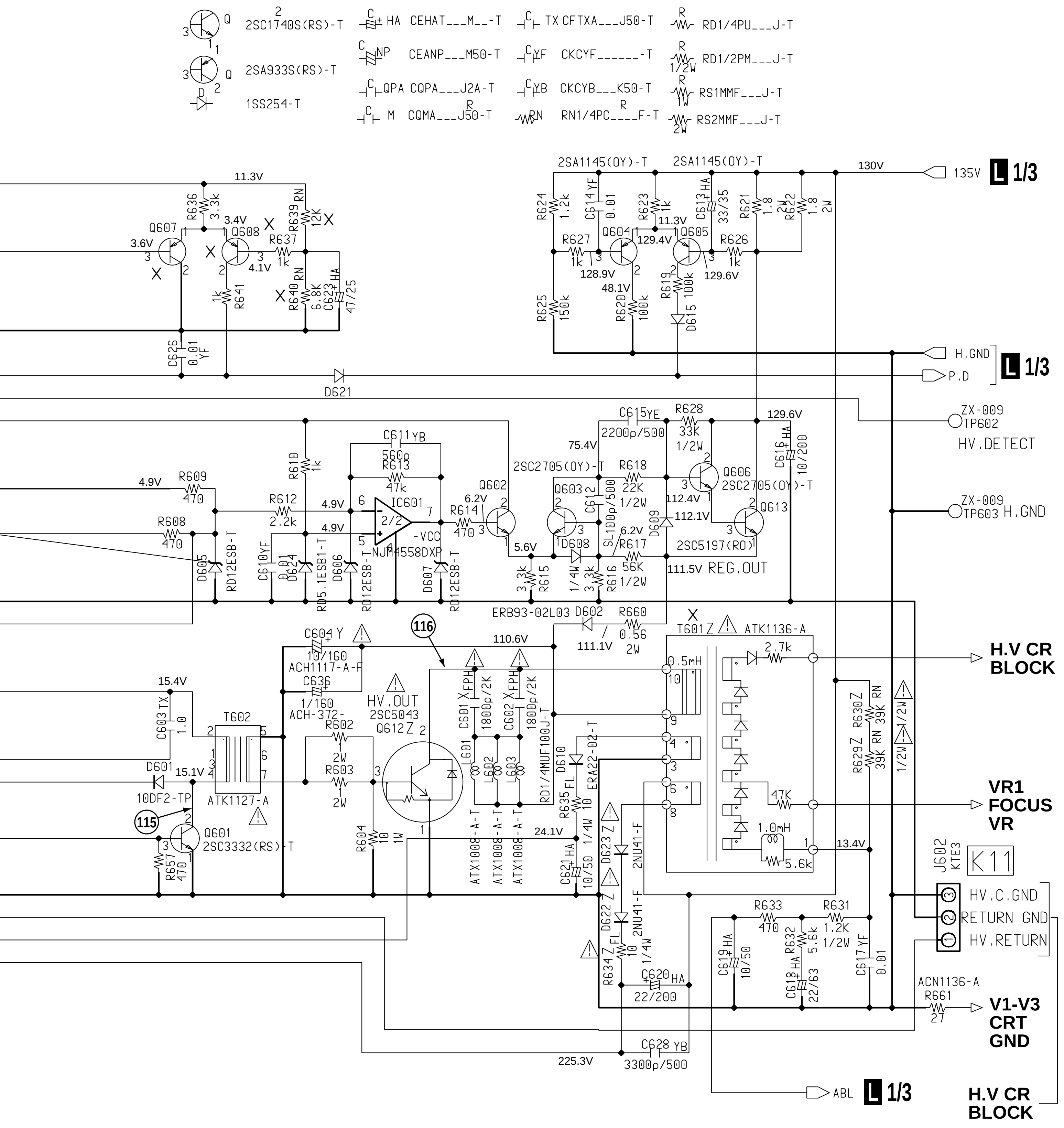
1. RESISTERS

(RS):METAL OXIDE FILM RESISTER
(RT):CEMENT RESISTER
(RN):METAL FILM RESISTER
(FL):NON FLAMMABLE RESISTER
THE OTHERS:CARBONFILM RESISTER (1/4 W)
Figures in pharenttheses
show the rated wattage.
Those unspecified ones are of 1/4W.
K:KΩ,M:MΩ,Unspecified ones are ofΩ

2. CAPACITORS

(HA):Aluminium electrolytic capasitors
p:pF,Unspecified ones are of uF
Capacity/Voltage
Unspecified ones are of 50V

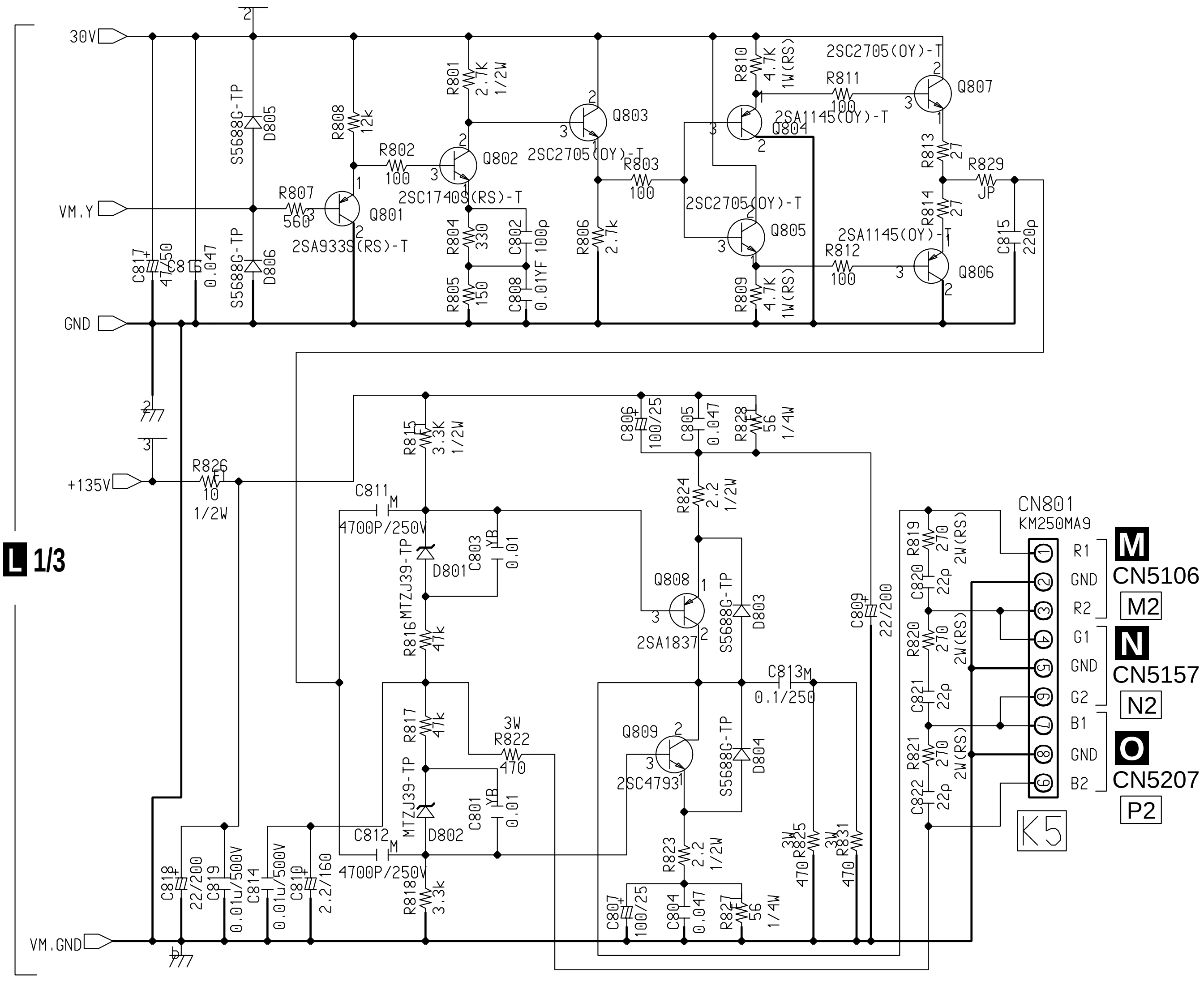
3. The ⚠ mark found on same component parts of indicates the importance of the safety factor of the parts. Therefore,when replacing,be sure to use parts of identical de-signation.



Q 2SC1740S(RS)-T
Q 2SA933S(RS)-T
D 1SS254-T
C HA CEHAT___M__-T
C NP CEANP___M50-T
C QPA CQPA___J2A-T
C M CQMA___J50-T
C TX CFTXA___J50-T
C YF CKCYF______-T
C YB CKCYB___K50-T
R RN RN1/4PC____F-T
R RD1/4PU___J-T
R 1/2W RD1/2PM___J-T
R 1W RS1MMF___J-T
R 2W RS2MMF___J-T
11.3V
R636 3.3k
R639 RN 12K
Q607
Q608
3.6V
3.4V
4.1V
R637 1k
R641 1k
R640 RN 6.8K
C623 HA 47/25
C626 0.01 YF
D621
2SA1145(OY)-T
2SA1145(OY)-T
130V
135V
L 1/3
R624 1.2k
C614 YF 0.01
R623 1k
C613 HA 33/35
R621 1.8 2W
R622 1.8 2W
R627 1k
Q604
Q605
11.3V
129.4V
128.9V
48.1V
129.6V
R626 1k
R625 150k
R620 100k
R619 100k
D615
H.GND
P.D
L 1/3
ZX-009 TP602
HV.DETECT
C615 YE 2200p/500
R628 33K 1/2W
129.6V
C616 HA 10/200
75.4V
C611 YB 560p
R613 47k
R610 1k
4.9V
R609 470
R612 2.2k
R608 470
4.9V
4.9V
IC601 2/2 NJM4558DXP
-VCC
Q602
6.2V
R614 470
5.6V
2SC2705(OY)-T
Q603
C612 SL100p/500
R618 22K 1/2W
Q606 2SC2705(OY)-T
112.4V
112.1V
Q613
ZX-009 TP603 H.GND
6.2V
R617 56K 1/2W
D609
2SC5197(RO)
111.5V REG.OUT
D605 RD12ESB-T
C610 YF 0.01
D624 RD5.1ESB1-T
D606 RD12ESB-T
D607 RD12ESB-T
R615 3.3k
D608 1/4W
R616 3.3k
ERB93-02L03 D602
R660 0.56 2W
111.1V
T601 Z ATK1136-A
2.7k
0.5mH
H.V CR BLOCK
C604 Y 10/160
ACH1117-A-F
C636 1/160
ACH-372-
116
110.6V
HV.OUT 2SC5043 Q612 Z
C601 FPH 1800p/2K
C602 FPH 1800p/2K
RD1/4MUF100J-T
15.4V
C603 TX 1.0
T602
ATK1127-A
R602 1 2W
R603 1 2W
D601 10DF2-TP
15.1V
115
Q601 2SC3332(RS)-T
R657 470
R604 10 1W
L601 L602 L603
ATX1008-A-T
D610 ERA22-02-T
R635 FL 10 1/4W
24.1V
C621 HA 10/50
D623 Z 2NU41-F
D622 Z 2NU41-F
R634 Z FL 10 1/4W
C620 HA 22/200
C628 YB 3300p/500
225.3V
R630 Z RN 39K
R629 Z RN 39K
1/2W
1/2W
47K
1.0mH
5.6k
13.4V
VR1 FOCUS VR
J602 KTE3
K11
HV.C.GND
RETURN GND
HV.RETURN
R633 470
R631 1.2K 1/2W
R632 5.6k
C619 HA 10/50
C618 HA 22/63
C617 YF 0.01
ACN1136-A
R661 27
V1-V3 CRT GND
ABL
L 1/3
H.V CR BLOCK

3.35 DEFLECTION SERVICE ASSY (3/3)

L 3/3 DEFLECTION SERVICE ASSY (AWV1809)
- VM BLOCK


30V
VM.Y
GND
+135V
VM.GND
L 1/3
S5688G-TP D805
S5688G-TP D806
R808 12k
R807 560
Q801 2SA933S(RS)-T
R802 100
Q802 2SC1740S(RS)-T
R801 2.7K 1/2W
Q803 2SC2705(OY)-T
R803 100
R804 330
C802 100p
R805 150
C808 0.01YF
R806 2.7k
R810 4.7K 1W(RS)
Q804 2SA1145(OY)-T
Q805 2SC2705(OY)-T
R809 4.7K 1W(RS)
R811 100
Q807 2SC2705(OY)-T
R813 27
R829 JP
R814 27
R812 100
Q806 2SA1145(OY)-T
C815 220p
C817 47/50
C816 0.047
R826 10 1/2W
R815 3.3K 1/2W
C811 M 4700P/250V
MTZJ39-TP D801
C803 YB 0.01
R816 47k
R817 47k
3W R822 470
MTZJ39-TP D802
C801 YB 0.01
C812 M 4700P/250V
R818 3.3k
C818 22/200
C819 0.01u/500V
C814 0.01u/500V
C810 2.2/160
C806 100/25
C805 0.047
R828 56 1/4W
R824 2.2 1/2W
Q808 2SA1837
S5688G-TP D803
C813 M 0.1/250
Q809 2SC4793
S5688G-TP D804
R823 2.2 1/2W
C807 100/25
C804 0.047
R827 56 1/4W
3W R825 470
3W R831 470
C809 22/200
R819 270 2W(RS)
C820 22p
R820 270 2W(RS)
C821 22p
R821 270 2W(RS)
C822 22p
CN801 KM250MA9
1 R1
2 GND
3 R2
4 G1
5 GND
6 G2
7 B1
8 GND
9 B2
K5
M CN5106 M2
N CN5157 N2
O CN5207 P2

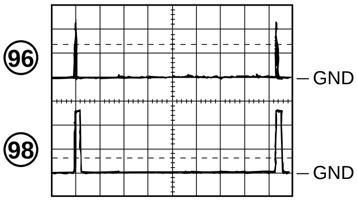
L

DEFLECTION SERVICE ASSY

Input signal
Video signal : EIA full color-bar
Picture quality : Standard
Range :DC range (Unless otherwise noted)

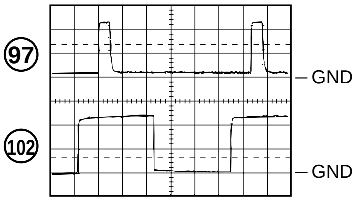
⑯ **TP307 (DV)**
V: 2V/div. H: 2msec/div.

⑱ **TP306 (V. BLK)**
V: 2V/div. H: 2msec/div.

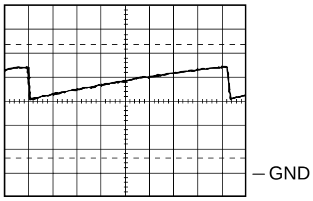


⑰ **TP308 (DH)**
V: 2V/div. H: 5µsec/div.

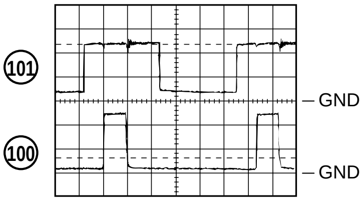
(102) **IC301 pin 2**
V: 5V/div. H: 5µsec/div.



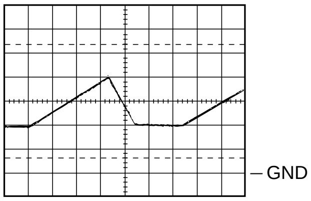
(99) **IC301 pin 20**
V: 2V/div. H: 2msec/div.



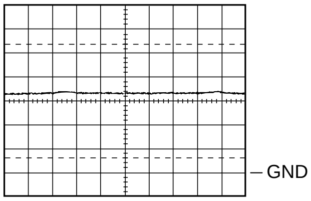
(100) **TP305 (DH. BLK)**
V: 2V/div. H: 5µsec/div.
(101) **TP304 (H. OSC)**
V: 2V/div. H: 5µsec/div.



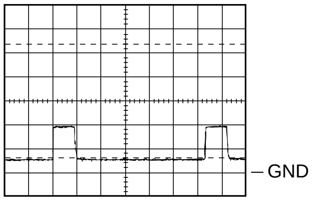
(103) **IC301 pin 3**
V: 2V/div. H: 5µsec/div.



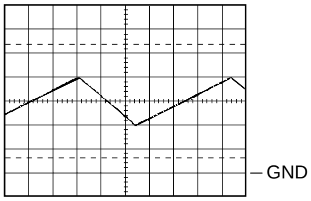
(104) **IC301 pin 4**
V: 2V/div. H: 5µsec/div.



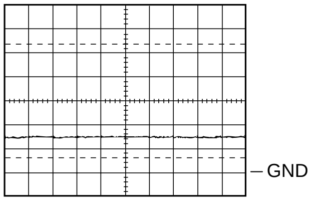
(105) **IC301 pin 5**
V: 2V/div. H: 5µsec/div.



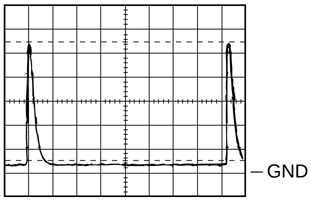
(106) **IC301 pin 9**
V: 2V/div. H: 5µsec/div.



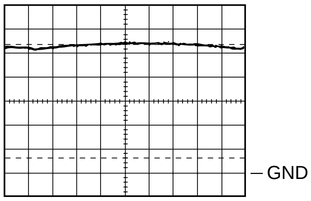
(107) **IC301 pin 10, 11**
V: 2V/div. H: 5µsec/div.



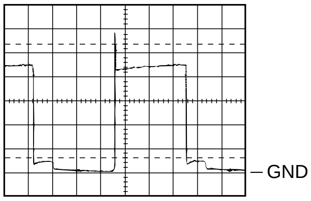
(108) **IC301 pin 16**
V: 2V/div. H: 2msec/div.



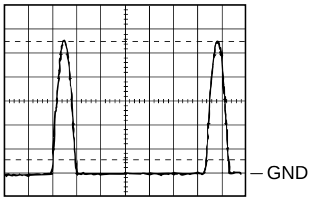
(109) **Q324 Emitter**
V: 20V/div. H: 2msec/div.



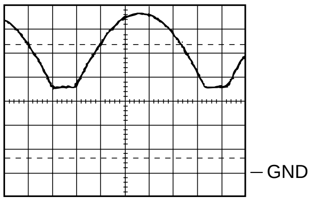
(110) **Q308 Collector**
V: 10V/div. H: 5µsec/div.



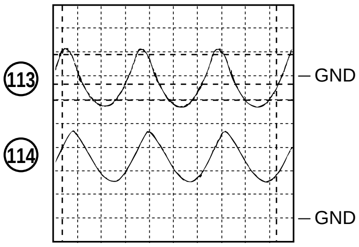
(111) **Q309 Collector**
V: 200V/div. H: 5µsec/div.



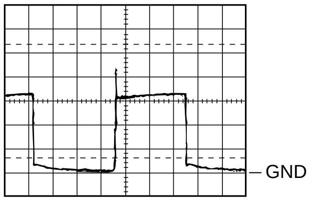
(112) **TP312**
V: 20V/div. H: 5µsec/div.



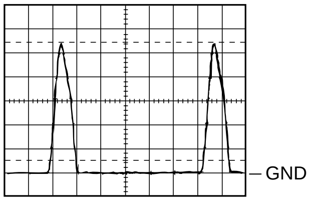
(113) **Q751 Base**
V: 2V/div. H: 10µsec/div.
(114) **Q754 Emitter**
V: 200V/div. H: 10µsec/div.



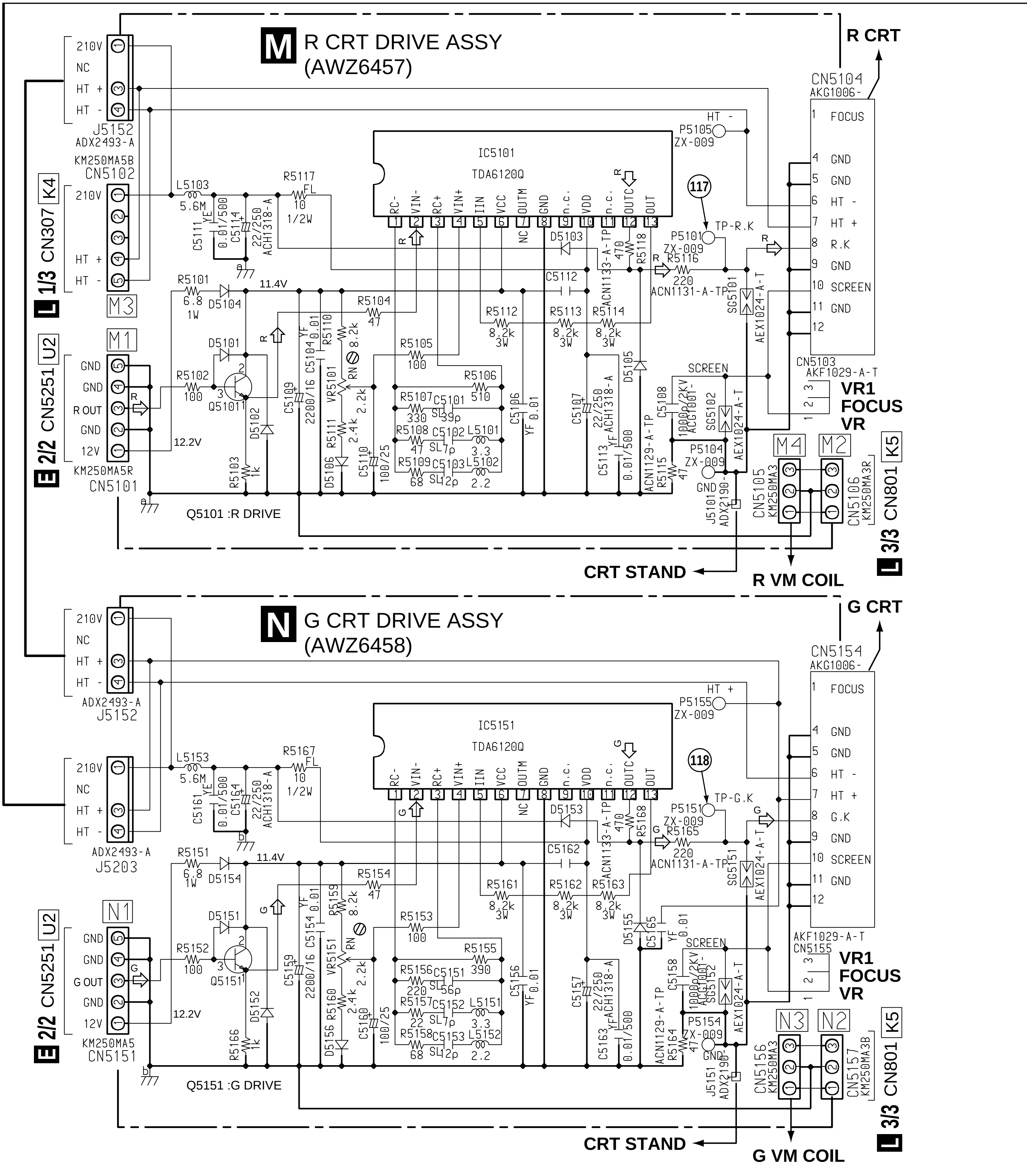
(115) **Q601 Collector**
V: 10V/div. H: 5µsec/div.



(116) **Q612 Collector**
V: 200V/div. H: 5µsec/div.



3.36 R, G and B CRT DRIVE ASSYS


A
B
C
D
M R CRT DRIVE ASSY
(AWZ6457)
R CRT
CN5104
AKG1006-
FOCUS
GND
HT -
HT +
R.K
SCREEN
CN5103
AKF1029-A-T
VR1
FOCUS
VR
210V
NC
HT +
HT -
J5152
ADX2493-A
KM250MA5B
CN5102
K4
L 1/3 CN307
M3
M1
E 2/2 CN5251 U2
GND
R OUT
12V
KM250MA5R
CN5101
IC5101
TDA6120Q
RC-
VIN-
RC+
VIN+
IIN
VCC
OUTM
n.c.
VDD
OUTC
OUT
NC
L5103
5.6M
C5111 YE 0.01/500
C5114 22/250 ACH1318-A
R5117 FL 10 1/2W
R5101 6.8 1W
D5104
11.4V
12.2V
D5101
R5102 100
Q5101
D5102
R5103 1k
C5109 2200/16
C5104 YF 0.01
R5110
R5104 47
VR5101 RN 8.2k
R5111 2.4k 2.2k
D5106
C5110 100/25
R5105 100
R5106 510
R5107 330
C5101 SL 39p
R5108 47
C5102 SL 7p
L5101 3.3
R5109 68
C5103 SL 12p
L5102 2.2
R5112 8.2k 3W
R5113 8.2k 3W
R5114 8.2k 3W
C5106 YF 0.01
C5112
D5103
C5107 22/250 ACH1318-A
C5113 YF 0.01/500
D5105
ACN1133-A-TP
470
R5118
P5105 ZX-009
P5101 ZX-009
TP-R.K
117
R5116 220
ACN1131-A-TP
SG5101
AEX1024-A-T
C5108 1000p/2KV ACG1001-
SG5102
ACN1129-A-TP
R5115 47
P5104 ZX-009
GND
J5101 ADX2190
M4
M2
CN5105 KM250MA3
CN5106 KM250MA3R
K5 CN801
L 3/3
Q5101 :R DRIVE
CRT STAND
R VM COIL
N G CRT DRIVE ASSY
(AWZ6458)
G CRT
CN5154
AKG1006-
G.K
AKF1029-A-T
CN5155
J5203
IC5151
L5153
C5161
C5164
R5167
R5151
D5154
D5151
R5152
Q5151
D5152
R5166
C5159
C5154
R5159
R5154
VR5151
R5160
D5156
C5160
R5153
R5155 390
R5156 220
C5151 SL 56p
R5157 22
C5152
L5151
R5158
C5153
L5152
R5161
R5162
R5163
C5156
C5162
D5153
C5157
C5163
D5155
C5165
R5168
P5155
P5151
TP-G.K
118
R5165
SG5151
C5158
SG5152
R5164
P5154
J5151
N1
N3
N2
CN5156 KM250MA3
CN5157 KM250MA3B
KM250MA5
CN5151
G OUT
Q5151 :G DRIVE
G VM COIL

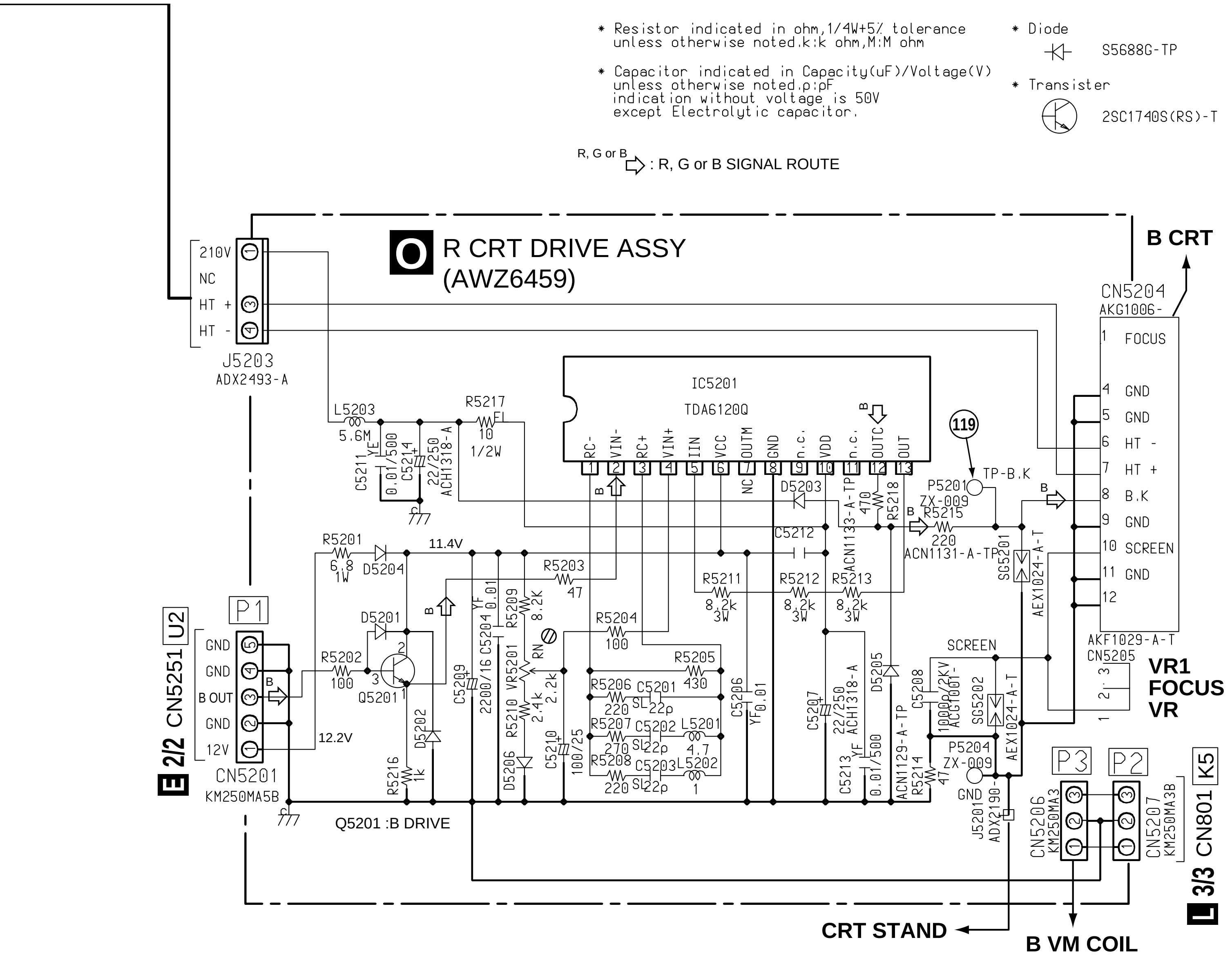
∗ Resistor indicated in ohm,1/4W+5% tolerance unless otherwise noted.k:k ohm,M:M ohm

∗ Capacitor indicated in Capacity(uF)/Voltage(V) unless otherwise noted.p:pF indication without voltage is 50V except Electrolytic capacitor.

∗ Diode S5688G-TP

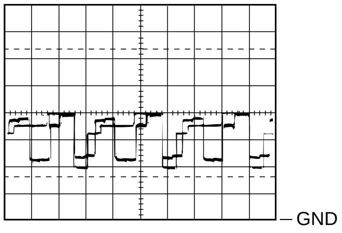
∗ Transister 2SC1740S(RS)-T

R, G or B ⇨ : R, G or B SIGNAL ROUTE

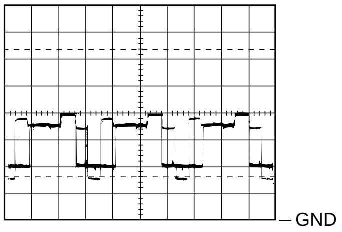

O R CRT DRIVE ASSY
(AWZ6459)
B CRT
CN5204
AKG1006-
1 FOCUS
4 GND
5 GND
6 HT -
7 HT +
8 B.K
9 GND
10 SCREEN
11 GND
12
AKF1029-A-T
CN5205
VR1
FOCUS
VR
210V
NC
HT +
HT -
J5203
ADX2493-A
IC5201
TDA6120Q
RC-
VIN-
RC+
VIN+
IIN
VCC
OUTM
GND
n.c.
VDD
n.c.
OUTC
OUT
L5203 5.6M
C5211 0.01/500 YE
C5214 22/250 ACH1318-A
R5217 10 1/2W FI
119 TP-B.K
P5201 ZX-009
D5203
ACN1133-A-TP
R5218 470
R5215 220
ACN1131-A-TP
SG5201 AEX1024-A-T
C5212
R5201 6.8 1W
D5204
11.4V
R5203 47
R5211 8.2k 3W
R5212 8.2k 3W
R5213 8.2k 3W
P1
E 2/2 CN5251 U2
GND
GND
B OUT
GND
12V
CN5201
KM250MA5B
12.2V
D5201
R5202 100
Q5201
D5202
R5216 1k
C5209 2200/16
C5204 0.01 YF
R5209 8.2k
VR5201 2.4k RN
R5210 2.2k
D5206
C5210 100/25
R5204 100
R5205 430
R5206 220
C5201 22p SL
R5207 270
C5202 22p SL
L5201 4.7
R5208 220
C5203 22p SL
L5202 1
C5206 0.01 YF
NC
C5207 22/250 ACH1318-A
C5213 0.01/500 YF
D5205
ACN1129-A-TP
C5208 1000p/2KV ACG1001-
SG5202 AEX1024-A-T
SCREEN
R5214 47
P5204 ZX-009
GND
J5201 ADX2190-
P3
P2
CN5206 KM250MA3
CN5207 KM250MA3B
CN801 K5
L 3/3
Q5201 :B DRIVE
CRT STAND
B VM COIL

INPUT Signal
Video signal: EIA full color-bar
Picture quality: Standard
Range: DC range

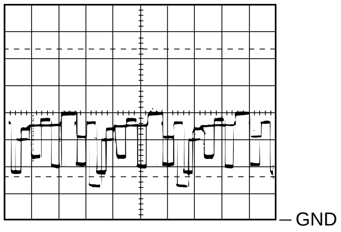
⑪⑦ **TP-R.K**
V: 50V/div. H: 10µsec/div.



⑪⑧ **TP-G.K**
V: 50V/div. H: 10µsec/div.

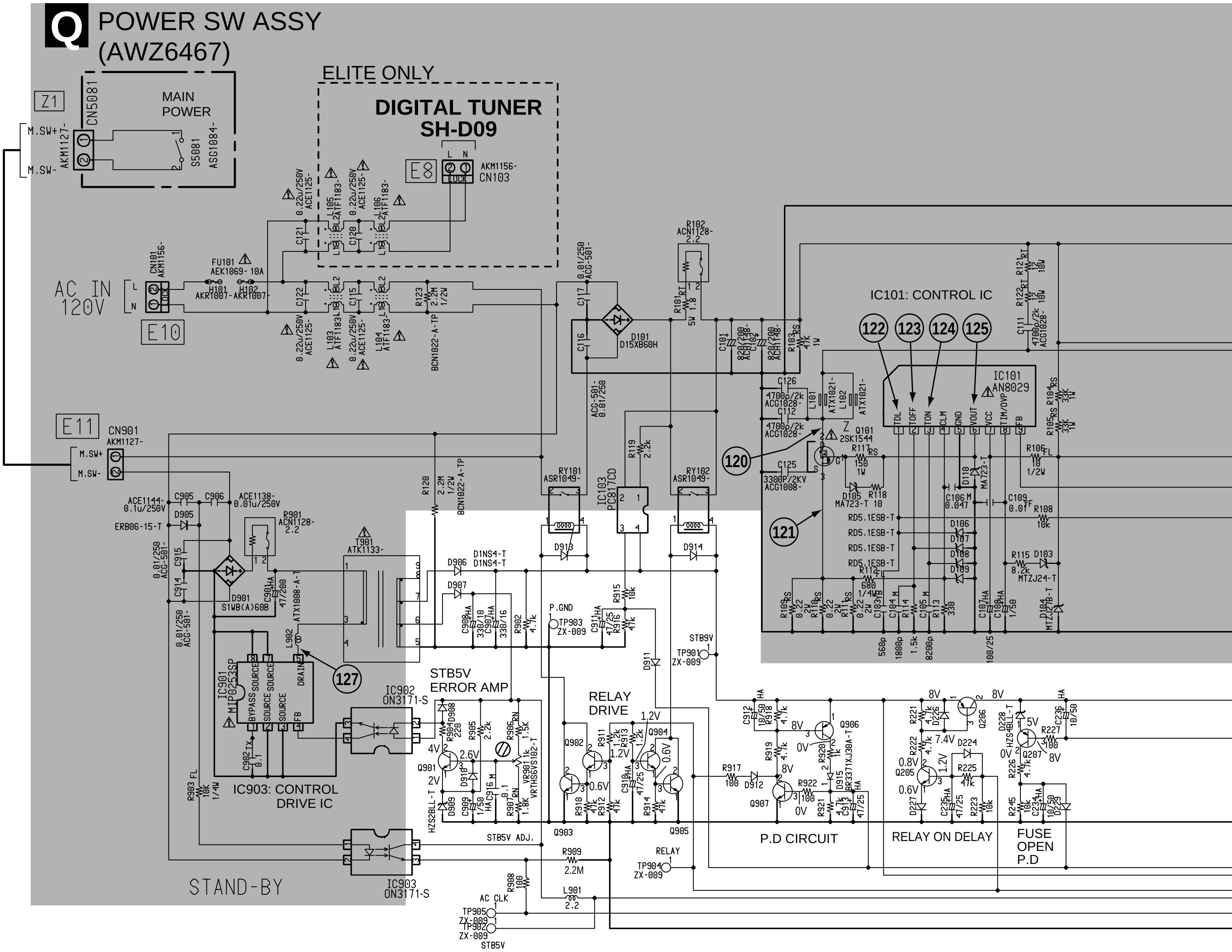


⑪⑨ **TP-B.K**
V: 50V/div. H: 10µsec/div.



3.37 POWER SUPPLY ASSY

P POWER SUPPLY ASSY
(AWV1795 : ELITE)
(AWV1808 : REGULAR)


Q POWER SW ASSY
(AWZ6467)
ELITE ONLY
DIGITAL TUNER
SH-D09
MAIN POWER
Z1
CN5081
AKM1127-
S5081
ASC1084-
M.SW+
M.SW-
E8
AKM1156-
CN103
AC IN
120V
E10
CN101
AKM1156-
FU101
AEK1069- 10A
H101 H102
AKR1007- AKR1007-
C121 C120 C122 C115
0.22u/250V
ACE1125-
L105 L106 L103 L104
ATF1183-
R123
BCN1022-A-TP
C117
0.01/250
ACG-501-
C116
D101
D15XB60H
R102
ACN1128-
2.2
R101
5W 1.8
C101 C102
820/200
ACH1148-
R103
IC101: CONTROL IC
122
123
124
125
IC101
AN8029
TDL TOFF TON CLM GND VOUT VCC TIM/OVP FB
C126
4700p/2k
ACG1028-
C112
L101 L102
ATX1021-
Q101
2SK1544
120
C125
3300P/2KV
ACG1008-
R117
150
1W
D105
MA723-T
R118
10
121
RD5.1ESB-T
D106 D107 D108 D109
D110
MA723-T
C106
0.047
C109
0.01
R108
10k
R106
10
1/2W
R115
8.2k
D103
MTZJ24-T
R111
680
1/4W
C103
R122
R121
10W
C111
4700p/2k
ACG1028-
R104
R105
E11
CN901
AKM1127-
RY101
ASR1049-
RY102
ASR1049-
R120
2.2M
1/2W
BCN1022-A-TP
IC103
PC817CD
R119
2.2k
D913
D914
C905 C906
ACE1144-
0.1u/250V
ACE1138-
0.01u/250V
D905
ERB06-15-T
R901
ACN1128-
2.2
C915
C914
0.01/250
ACG-501-
D901
S1WB(A)60B
C904
47/200
T901
ATK1133-
L902
ATX1008-A-T
D906
D1NS4-T
D907
C908
C907
330/16
R902
4.7k
P.GND
TP903
ZX-009
C911
R916
R915
10k
STB9V
TP901
ZX-009
D911
127
IC901
MIP0253SP
BYPASS SOURCE SOURCE DRAIN
CONTROL FB
C902
0.1
R903
10k
1/4W
IC903: CONTROL
DRIVE IC
IC902
ON3171-S
STB5V
ERROR AMP
R904
D908
R905
2.2k
R906
1.5k
VR901
1k
VRTHS6VS102-T
Q901
4V
2.6V
2V
D910
C916
C909
D909
HZS2BLL-T
R907
1.8K
RELAY
DRIVE
Q902
Q903
R910
R911
R912
R913
1.2V
Q904
0.6V
Q905
R914
C919
47/25
STB5V ADJ.
R909
2.2M
RELAY
TP904
ZX-009
IC903
ON3171-S
STAND-BY
R908
100
AC CLK
TP905
ZX-009
TP902
ZX-009
STB5V
L901
2.2
C912
R918
8V
Q906
R919
R917
100
D912
R920
1k
R922
100
Q907
0V
R921
C913
47/25
D915
BR3371XJ30A-T
P.D CIRCUIT
8V
R221
D226
Q206
R222
4.7k
7.4V
D224
0.8V
Q205
1.2V
0.6V
D227
C235
R225
47k
R223
10k
RELAY ON DELAY
D228
HZS4BLL-T
C236
10/50
5V
R227
100
0V
Q207
8V
R226
R245
10k
C234
D229
FUSE
OPEN
P.D

▨ : CHARGED SECTION

1.RESISTORS
(RS);METAL OXIDE FILM RESISTOR
(RT);CEMENT RESISTOR
(RN);METAL FILM RESISTOR
(FL);NONFLAMMABLE RESISTOR
THE OTHERS;CARBON FILM RESISTOR

Those unspecified ones are of 1/4W
k;kΩ ,M;MΩ ,Unspecified ones are ofΩ

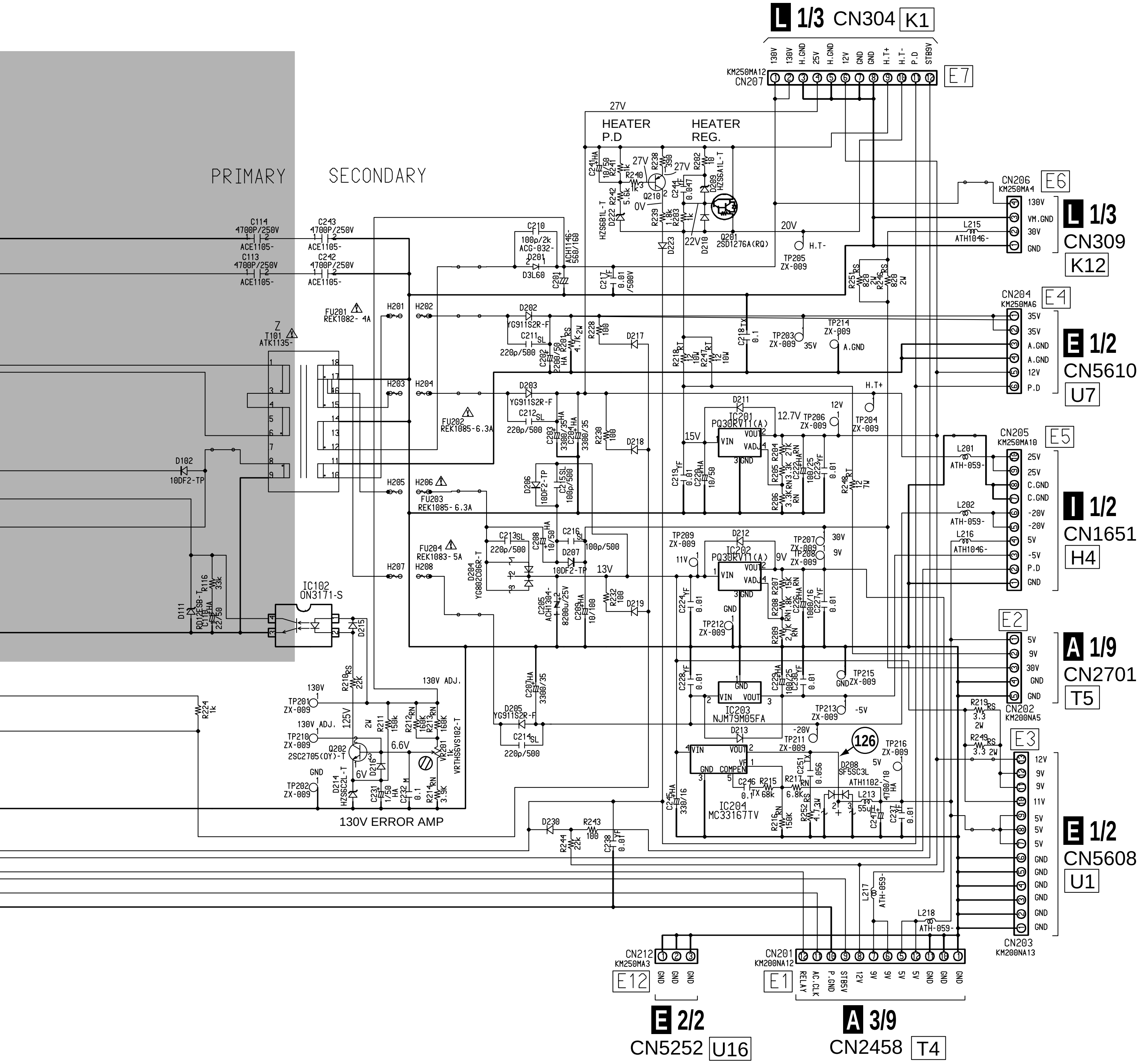
2.CAPACITORS
(YF);CERAMIC CAPACITOR
(SL);CERAMIC CAPACITOR
(HA);HIGH TEMP CHEMICAL CAPACITOR
(YB);CERAMIC CAPACITOR
(M);MILAR CAPACITOR
p;pF,Unspecified ones are ofμ F
Capacity / Voltage (;A.C,no mark;D.C)
Unspecified ones are of 50V

3.The ⚠ mark found on same component parts indicates
the importance of the safety factor of the parts.
Therefore,when replacing,be sure to use parts of identical de-signation.

2SA933S(RS)-T
2SC1740S(RS)-T
1SS254-T

- NOTE FOR FUSE REPLACEMENT

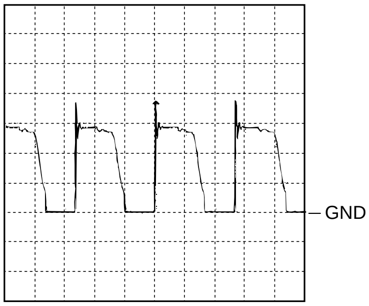
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE WITH SAME TYPE AND RATINGS ONLY.


L 1/3 CN304 K1
KM250MA12
CN207
E7
130V 130V H.GND 25V H.GND 12V GND GND H.T+ H.T- P.D STB9V
27V
HEATER P.D
HEATER REG.
PRIMARY
SECONDARY
C114 4700P/250V ACE1105-
C113 4700P/250V ACE1105-
C243 4700P/250V ACE1105-
C242 4700P/250V ACE1105-
C210 100p/2k ACG-032-
D201 D3L60
ACH1146- 560/160
C201
C217 0.01 /500V
Q210
Q201 2SD1276A(RQ)
HZS6B1L-T
20V
22V
H.T-
TP205 ZX-009
CN206 KM250MA4 E6
130V VM.GND 30V GND
L 1/3 CN309 K12
L215 ATH1046-
FU201 REK1082- 4A
T101 ATK1135-
H201 H202 H203 H204 H205 H206 H207 H208
D202 YG911S2R-F
D203 YG911S2R-F
FU202 REK1085-6.3A
FU203 REK1085- 6.3A
FU204 REK1083- 5A
D204 YG802C06R-T
D205 YG911S2R-F
D206 10DF2-TP
D207 10DF2-TP
D217 D218 D219
TP203 ZX-009 35V
TP214 ZX-009 A.GND
CN204 KM250MA6 E4
35V 35V A.GND A.GND 12V P.D
E 1/2 CN5610 U7
H.T+
IC201 PQ30RV11(A)
VIN VOUT VADJ GND
12.7V
15V
TP206 ZX-009 12V
TP204 ZX-009
CN205 KM250MA10 E5
25V 25V C.GND C.GND -20V -20V 5V -5V P.D GND
L201 ATH-059-
L202 ATH-059-
L216 ATH1046-
I 1/2 CN1651 H4
TP209 ZX-009
IC202 PQ30RV11(A)
11V 9V 13V 30V
TP207 ZX-009
TP208 ZX-009
TP212 ZX-009
E2
5V 9V 30V GND GND
A 1/9 CN2701 T5
IC203 NJM79M05FA
TP213 ZX-009 -5V
TP215 ZX-009
CN202 KM200NA5
R219 3.3 2W
R249 3.3 2W
E3
12V 9V 9V 11V 5V 5V 5V GND GND GND GND GND
E 1/2 CN5608 U1
CN203 KM200NA13
IC204 MC33167TV
VIN VOUT GND COMPEN VF
-20V
TP211 ZX-009
TP216 ZX-009
D208 SF5SC3L
ATH1102
L213 55uH
126
IC102 ON3171-S
D102 10DF2-TP
D111
D215
130V ERROR AMP
130V ADJ.
TP201 ZX-009
TP210 ZX-009
TP202 ZX-009
Q202 2SC2705(OY)-T
D214 HZS6C2L-T
VR201 VRTH56VS102-T
125V 6.6V 6V
D230
R243 100
L217 ATH-059-
L218 ATH-059-
CN212 KM250MA3
E12
GND GND GND
E 2/2 CN5252 U16
CN201 KM200NA12
E1
RELAY AC.CLK P.GND STB5V 12V 9V 9V 5V 5V GND GND GND
A 3/9 CN2458 T4

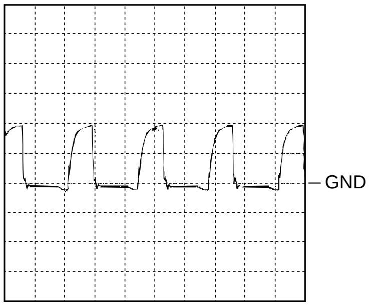
P POWER SUPPLY ASSY

Input signal
Video signal : EIA full color-bar
Picture quality : Standard
Range :DC range (Unless otherwise noted)

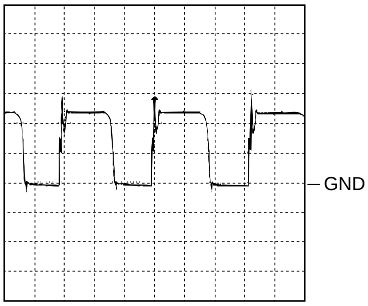
(120) **Q101 Drain**
V: 100V/div. H: 10µsec/div.



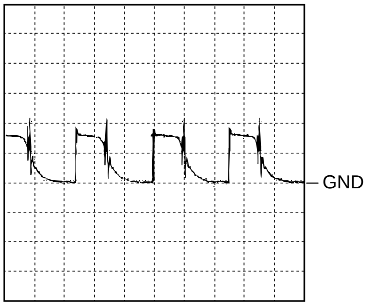
(121) **Q101 Gate**
V: 10V/div. H: 10µsec/div.



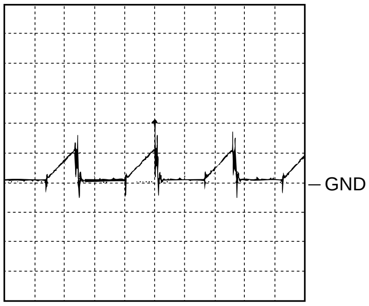
(122) **IC101 pin 1**
V: 1V/div. H: 10µsec/div.



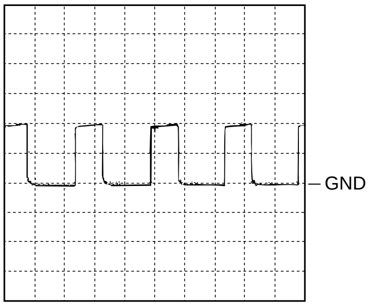
(123) **IC101 pin 2**
V: 500mV/div. H: 10µsec/div.



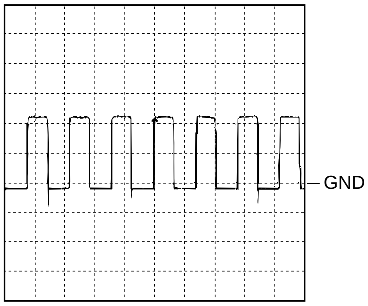
(124) **IC101 pin 3**
V: 500mV/div. H: 10µsec/div.



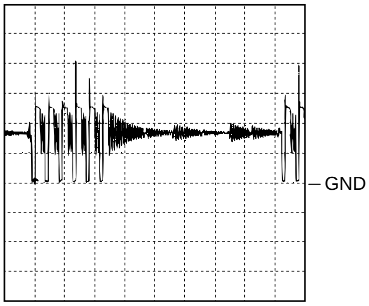
(125) **IC101 pin 6**
V: 10V/div. H: 10µsec/div.



(126) **IC204 pin 2**
V: 5V/div. H: 10µsec/div.

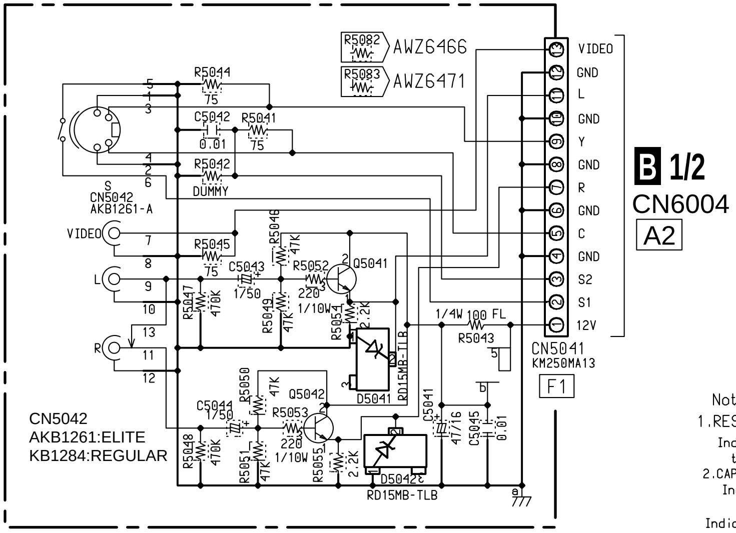


(127) **IC901 pin 5**
V: 100V/div. H: 50µsec/div.



3.38 FRONT INPUT, FRONT CONTROL and LED DPO ASSYS

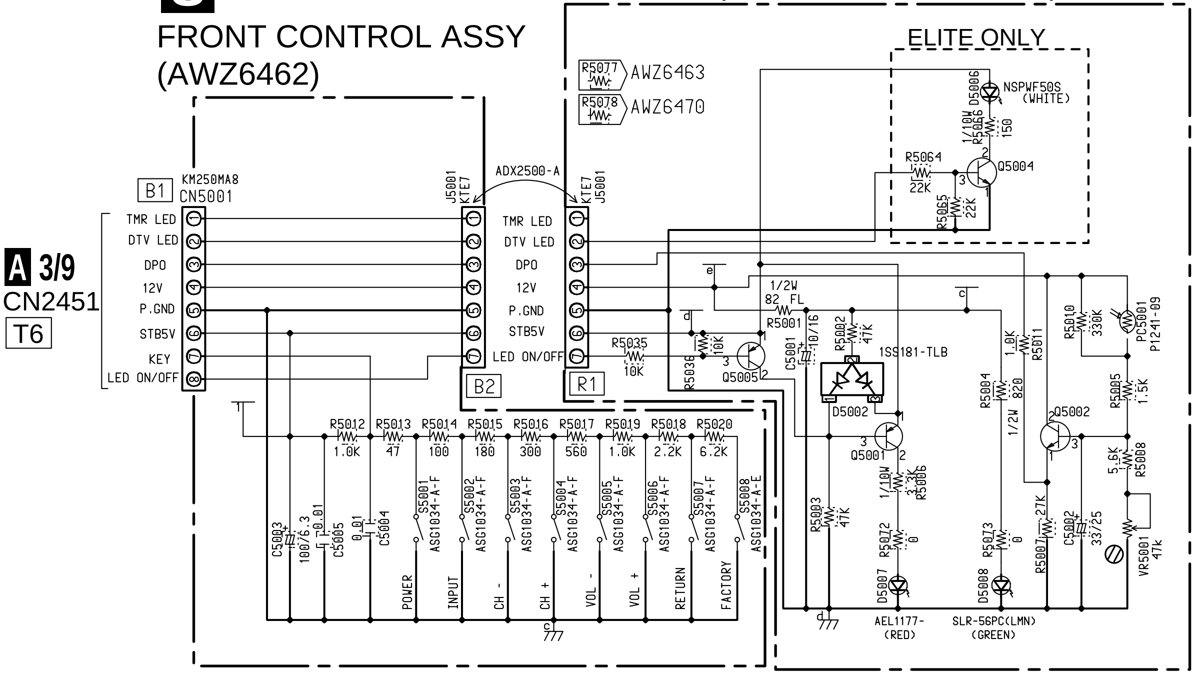
R FRONT INPUT ASSY
(AWZ6466 : ELITE)
(AWZ6471 : REGULAR)


R5082 AWZ6466
R5083 AWZ6471
R5044 75
C5042 0.01
R5041 75
R5042 DUMMY
S
CN5042
AKB1261-A
VIDEO
L
R
R5045 75
R5046 47K
C5043 1750
R5052 220 1/10W
Q5041
R5047 470K
R5049 47K
R5054 2.2K
D5041
RD15MB-TLB
1/4W 100 FL
R5043
CN5041
KM250MA13
F1
R5050 47K
C5044 1750
Q5042
R5053 220 1/10W
R5048 470K
R5051 47K
R5055 2.2K
D5042
RD15MB-TLB
C5041 47/16
C5045 0.01
CN5042
AKB1261:ELITE
KB1284:REGULAR
VIDEO
GND
L
GND
Y
GND
R
GND
C
GND
S2
S1
12V
B 1/2
CN6004
A2

Notes
1.RESISTORS
Indicated in Ω
tolerance unless otherwise noted k Ω
2.CAPASITORS
Indicated in capacity(uF)/Voltage unless
otherwise noted p pF
Indication without voltage is 50V except electrolytic capacitor.

T LED DPO ASSY
(AWZ6463 : ELITE)
(AWZ6470 : REGULAR)

S
FRONT CONTROL ASSY
(AWZ6462)

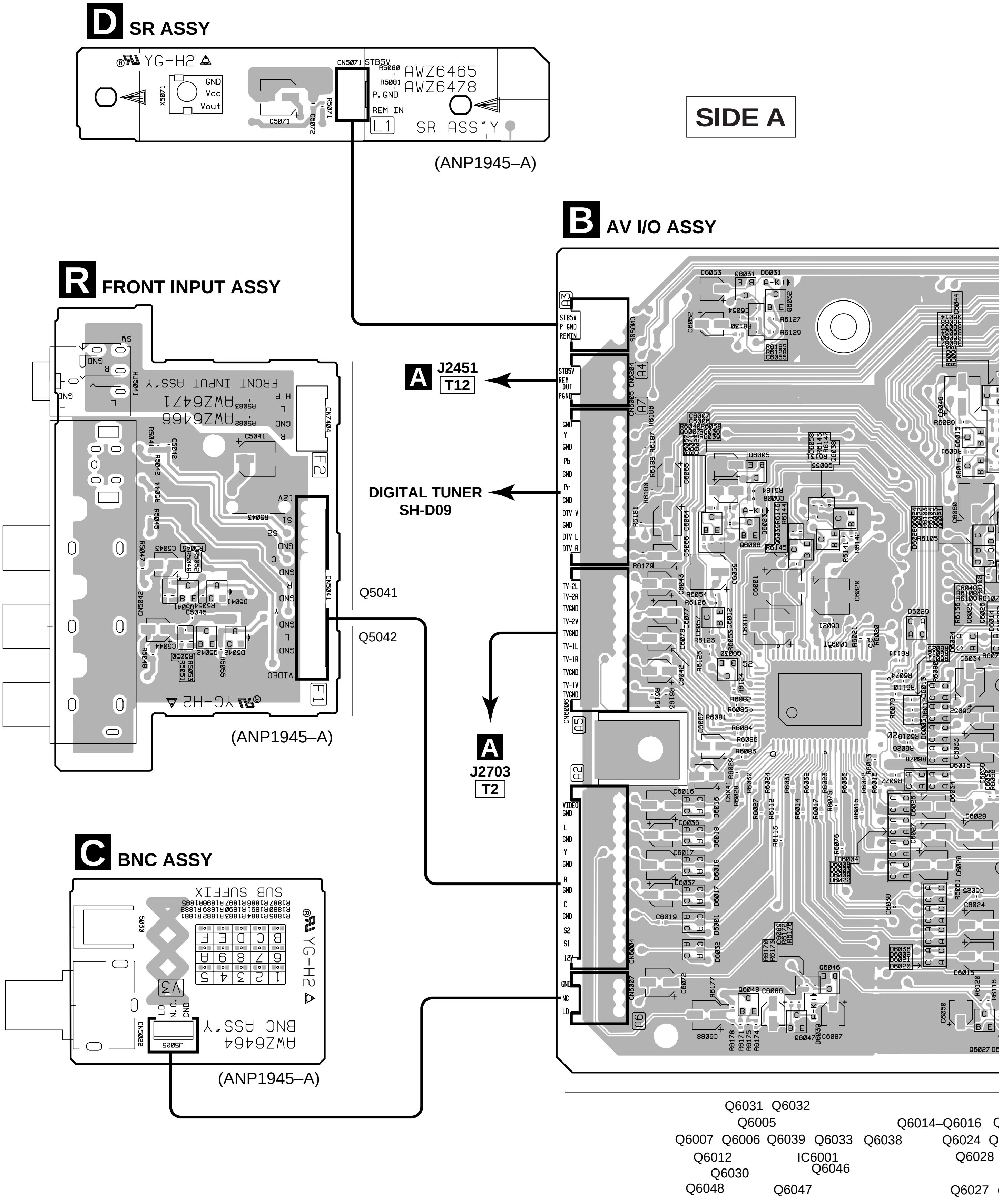

ELITE ONLY
R5077 AWZ6463
R5078 AWZ6470
NSPWF50S (WHITE)
D5006
R5066 150 1/10W
R5064 22K
Q5004
R5065 22K
B1
KM250MA8
CN5001
J5001 KTE7
ADX2500-A
KTE7 J5001
A 3/9
CN2451
T6
TMR LED
DTV LED
DPO
12V
P.GND
STB5V
KEY
LED ON/OFF
B2
R1
R5035 10K
R5036 10K
Q5005
1/2W 82 FL
R5001
C5001 10/16
R5002 47K
1SS181-TLB
D5002
Q5001
R5006 3.3K 1/10W
R5003 47K
R5072 0
D5007
AEL1177- (RED)
R5004 820 1/2W
R5073 0
D5008
SLR-56PC(LMN) (GREEN)
R5011 1.0K
R5010 330K
PC5001 P1241-09
R5005 1.5K
Q5002
R5008 5.6K
R5007 27K
C5002 33/25
VR5001 47k
R5012 1.0K
R5013 47
R5014 100
R5015 180
R5016 300
R5017 560
R5019 1.0K
R5018 2.2K
R5020 6.2K
C5003 100/6.3
C5005 0.01
C5004 0.01
S5001 ASG1034-A-F POWER
S5002 ASG1034-A-F INPUT
S5003 ASG1034-A-F CH -
S5004 ASG1034-A-F CH +
S5005 ASG1034-A-F VOL -
S5006 ASG1034-A-F VOL +
S5007 ASG1034-A-F RETURN
S5008 ASG1034-A-E FACTORY

FRONT CONTROL ASSY

S5001	: STANDBY/ON
S5002	: INPUT SELECTOR
S5003	: CHANNEL –
S5004	: CHANNEL +
S5005	: VOLUME –
S5006	: VOLUME +
S5007	: RETURN
S5008	: FACTORY ADJ

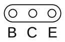
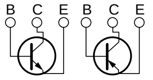
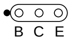
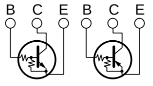
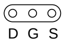
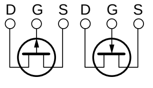
4. PCB CONNECTION DIAGRAM

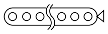
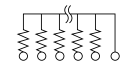
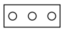
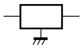
4.1 AV I/O ASSY, SR ASSY, FRONT INPUT ASSY and BNC ASSY


A
B
C
D
D SR ASSY
YG-H2
X5071
GND
Vcc
Vout
C5071
C5072
R5071
CN5071 STB5V
R5080
R5081
P.GND
REM IN
AWZ6465
AWZ6478
L1
SR ASS'Y
(ANP1945–A)
SIDE A
B AV I/O ASSY
R FRONT INPUT ASSY
FRONT INPUT ASS'Y
AWZ6471
AWZ6466
SW
GND
R
L
HJ5041
CN7404
F2
12V
S1
S2
GND
C
Y
VIDEO
CN5041
F1
Q5041
Q5042
(ANP1945–A)
A J2451 T12
DIGITAL TUNER SH-D09
A J2703 T2
STB5V
P GND
REMIN
CN6503
REM OUT
PGND
CN6204
A3
A4
A7
A5
A2
A6
Y
Pb
Pr
DTV V
DTV L
DTV R
TV-2L
TV-2R
TVGND
TV-2V
TV-1L
TV-1R
TV-1V
CN6006
CN6004
CN6007
IC6001
C BNC ASSY
SUB SUFFIX
BNC ASS'Y
AWZ6464
YG-H2
V3
LD
N.C.
GND
J5025
CN5022
5030
(ANP1945–A)
Q6031 Q6032
Q6005
Q6014–Q6016
Q6007 Q6006 Q6039 Q6033 Q6038
Q6024
Q6012
IC6001
Q6028
Q6030
Q6046
Q6048
Q6047
Q6027

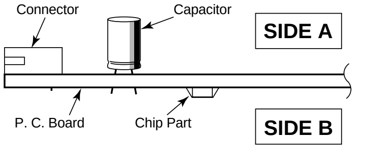
NOTE FOR PCB DIAGRAMS:

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor

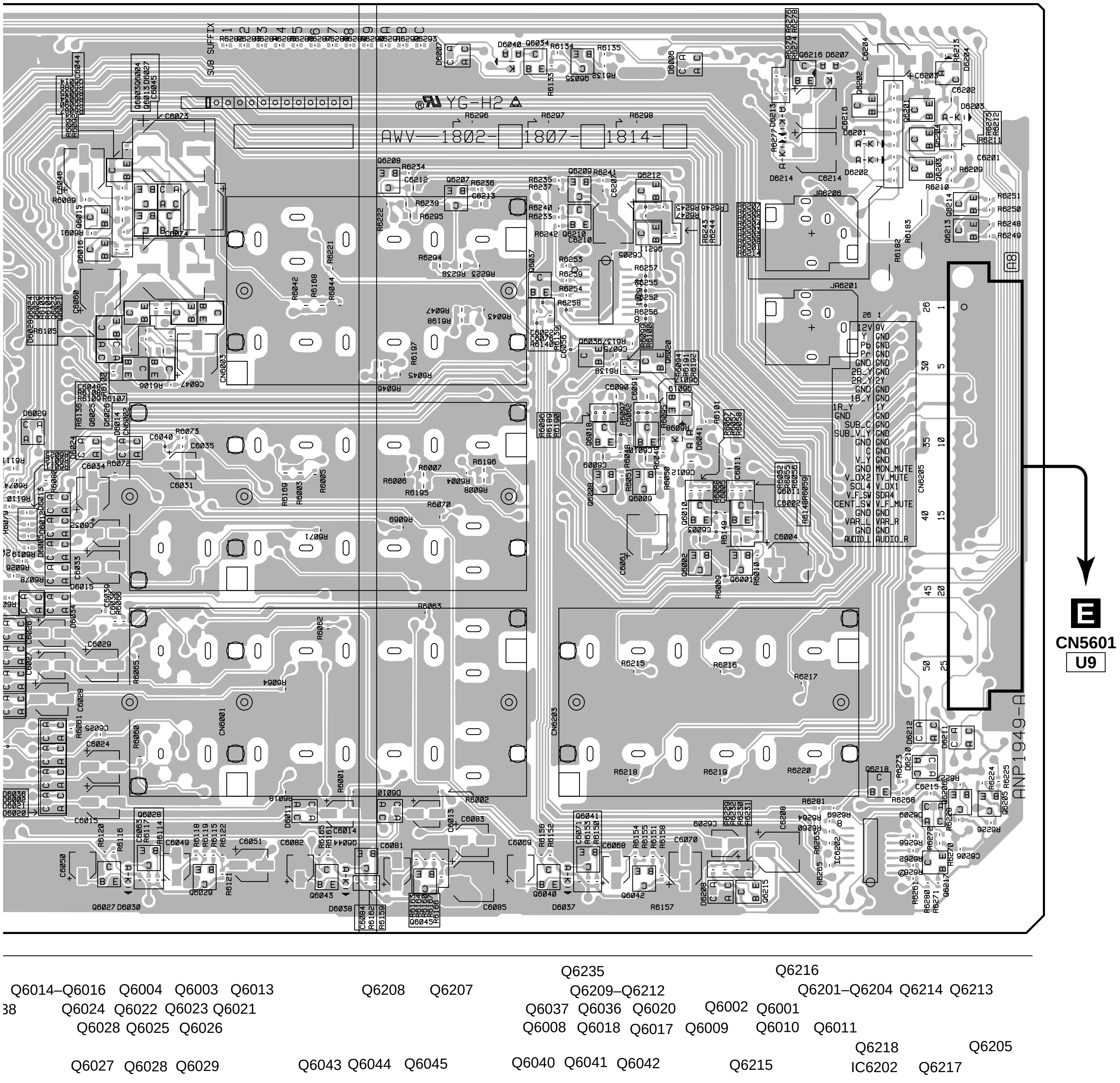
Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. Viewpoint of PCB diagrams


Connector
Capacitor
SIDE A
P. C. Board
Chip Part
SIDE B

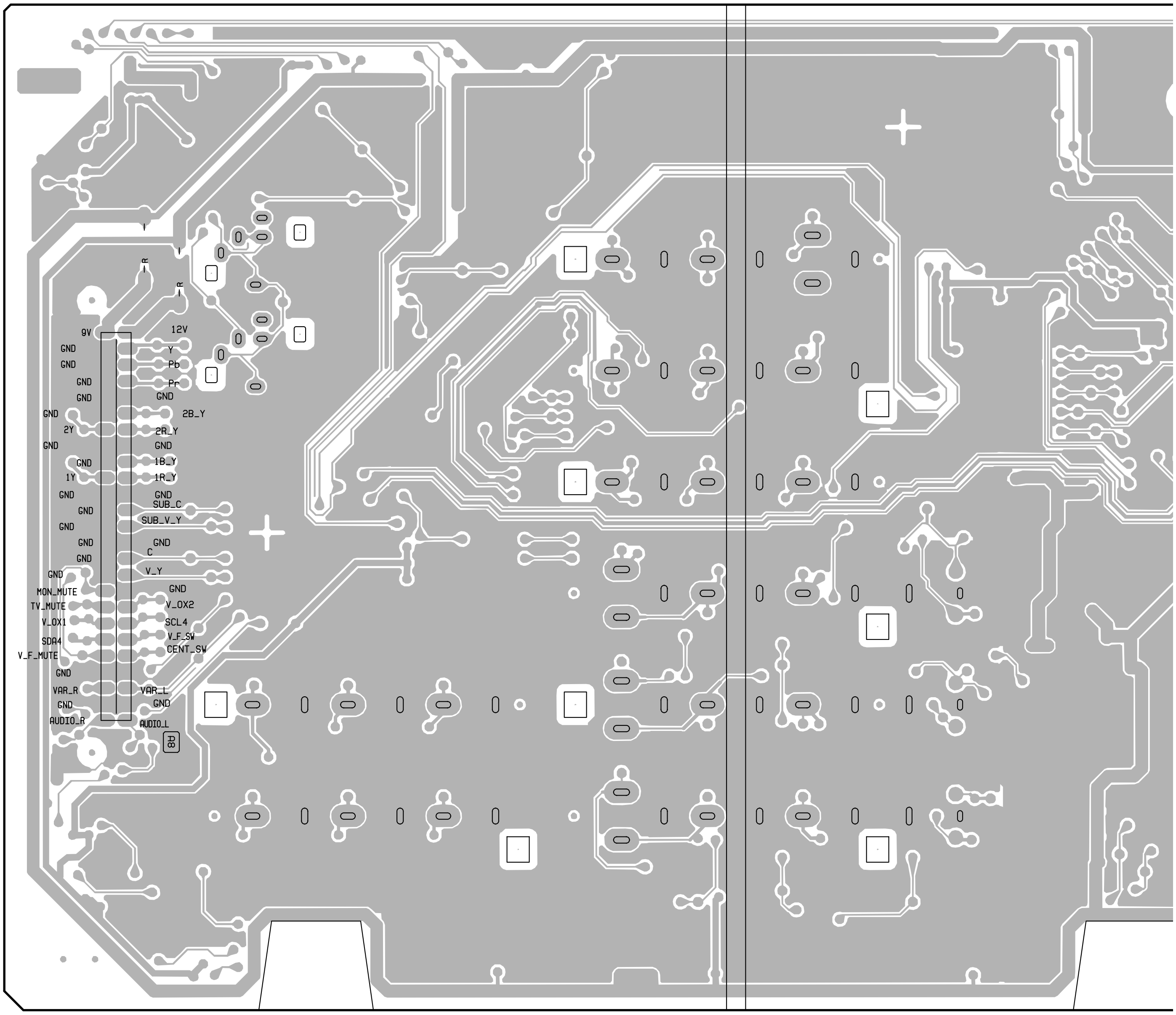
SIDE A

(ANP1949–A)


AWV—1802-
1807-
1814-
YG-H2
SUB SUFFIX
CN6205
JA6201
JA6206
CN6001
CN6003
CN6203
ANP1949-A
E
CN5601
U9
Q6014–Q6016 Q6004 Q6003 Q6013
Q6024 Q6022 Q6023 Q6021
Q6028 Q6025 Q6026
Q6027 Q6028 Q6029
Q6208 Q6207
Q6043 Q6044 Q6045
Q6235
Q6209–Q6212
Q6037 Q6036 Q6020
Q6008 Q6018 Q6017
Q6040 Q6041 Q6042
Q6002 Q6001
Q6009 Q6010 Q6011
Q6215
Q6216
Q6201–Q6204 Q6214 Q6213
Q6218
IC6202
Q6217
Q6205

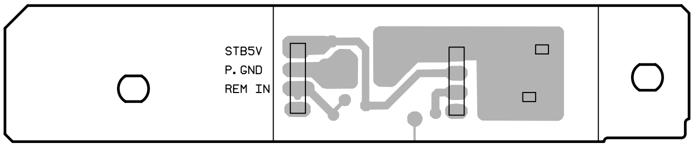
SIDE B

B AV I/O ASSY

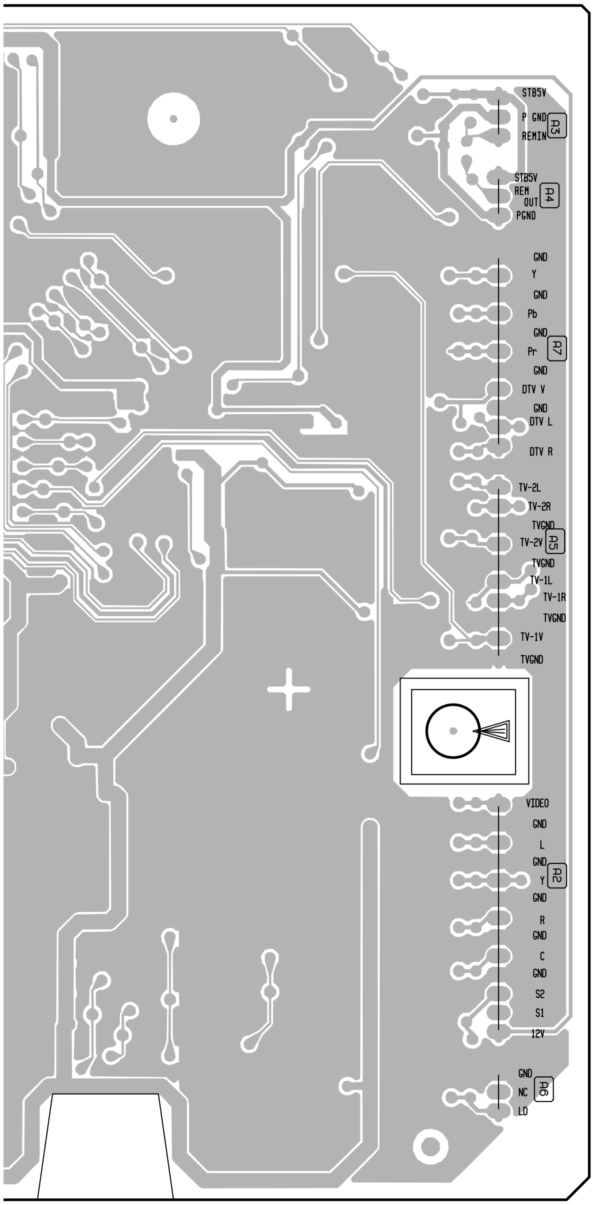

_R
_R
9V
12V
GND
Y
GND
Pb
GND
Pr
GND
GND
GND
2B_Y
2Y
2R_Y
GND
GND
GND
1B_Y
1Y
1R_Y
GND
GND
GND
SUB_C
SUB_V_Y
GND
GND
GND
C
GND
V_Y
GND
MON_MUTE
GND
TV_MUTE
V_OX2
V_OX1
SCL4
SDA4
V_F_SW
V_F_MUTE
CENT_SW
GND
VAR_R
VAR_L
GND
GND
AUDIO_R
AUDIO_L
A8

SIDE B

D SR ASSY

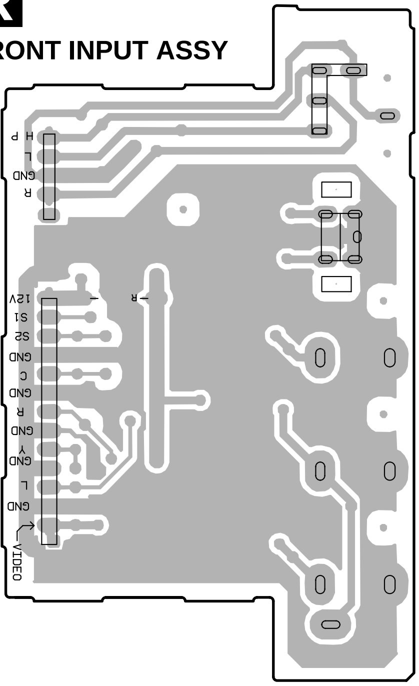

STB5V
P.GND
REM IN

(ANP1945–A)


STB5V
P GND
REMIN
A3
STB5V
REM
OUT
PGND
A4
GND
Y
GND
Pb
GND
Pr
A7
GND
DTV V
GND
DTV L
DTV R
TV-2L
TV-2R
TVGND
TV-2V
A5
TVGND
TV-1L
TV-1R
TVGND
TV-1V
TVGND
VIDEO
GND
L
GND
Y
A2
GND
R
GND
C
GND
S2
S1
12V
GND
NC
LD
A6

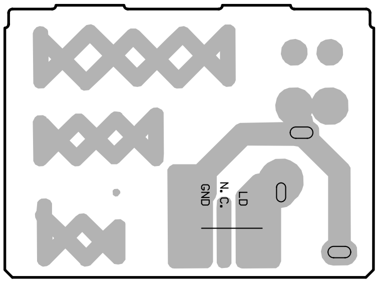
(ANP1949–A)

R FRONT INPUT ASSY


H P
L
GND
R
12V
S1
S2
GND
C
GND
R
GND
Y
GND
L
GND
VIDEO
L
R

(ANP1945–A)

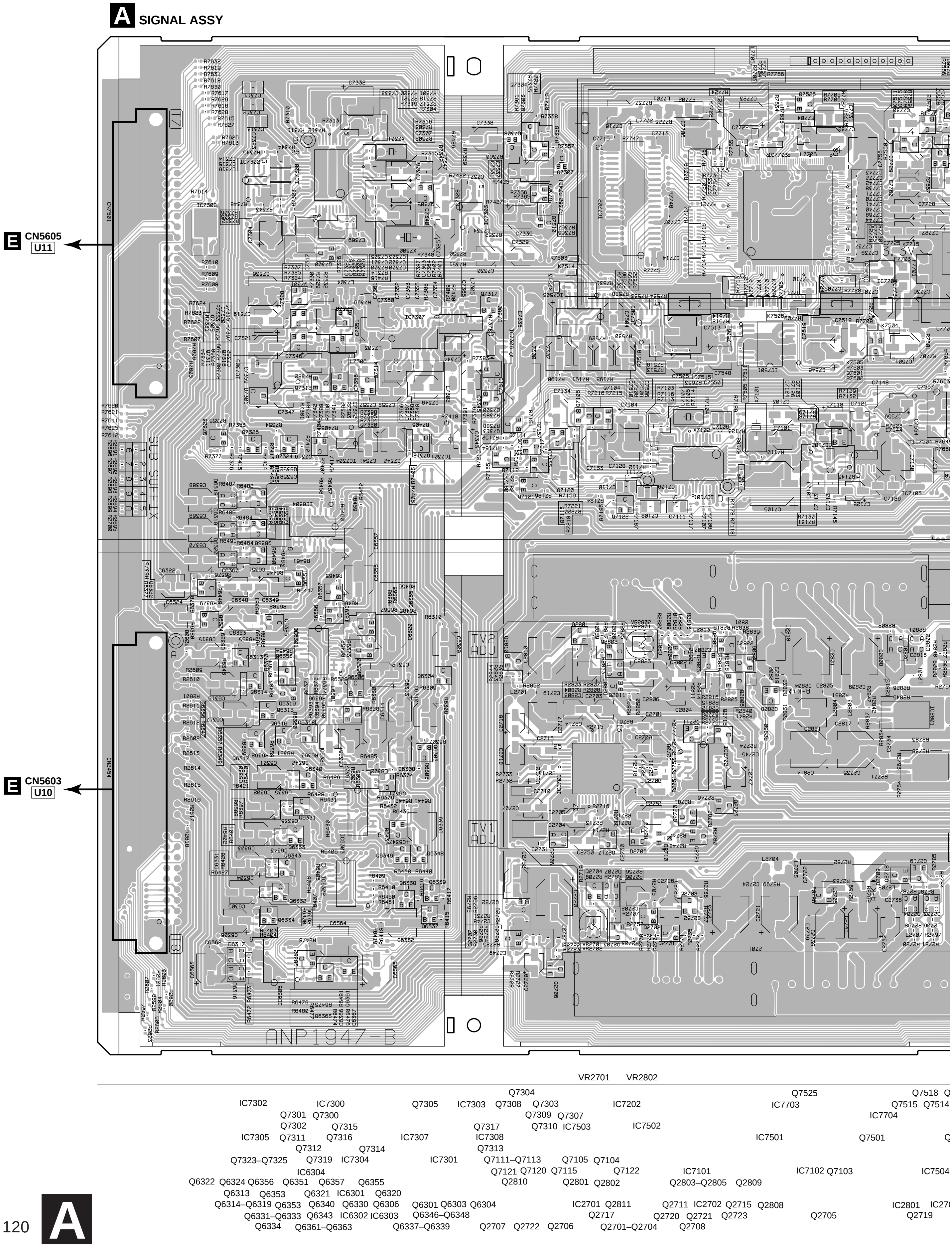
C BNC ASSY



(ANP1945–A)

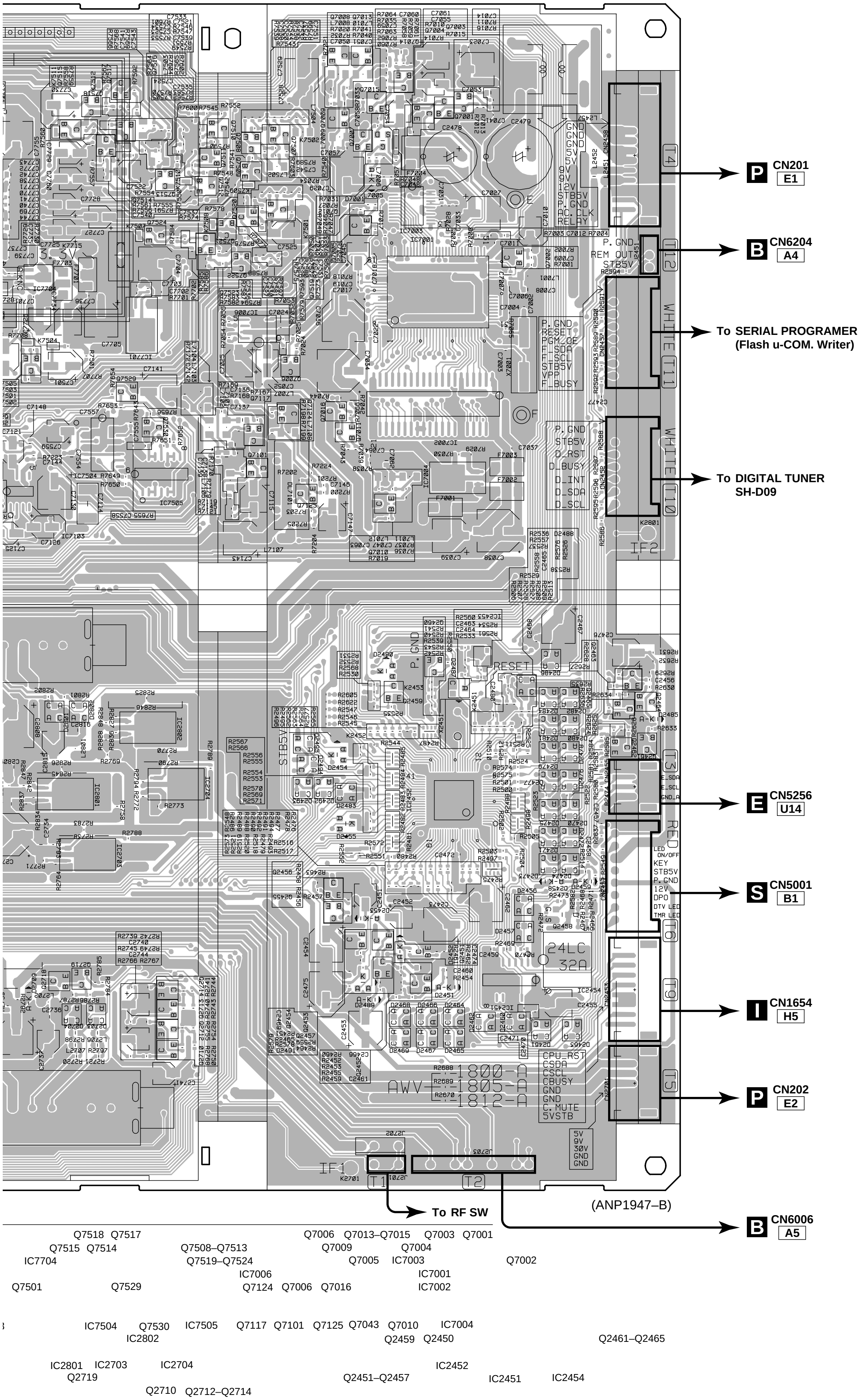
4.2 SIGNAL ASSY

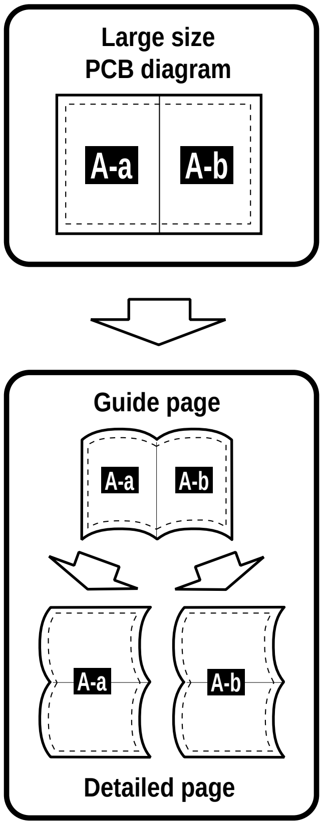
A-a


A SIGNAL ASSY
E CN5605 U11
E CN5603 U10
SUB SUFFIX
TV2 ADJ
TV1 ADJ
ANP1947-B
VR2701 VR2802
Q7304
IC7302 IC7300 Q7305 IC7303 Q7308 Q7303 IC7202 Q7525 Q7518
Q7301 Q7300 Q7309 Q7307 IC7703 Q7515 Q7514
Q7302 Q7315 Q7317 Q7310 IC7503 IC7502 IC7704
IC7305 Q7311 Q7316 IC7307 IC7308 IC7501 Q7501
Q7312 Q7314 Q7313
Q7323–Q7325 Q7319 IC7304 IC7301 Q7111–Q7113 Q7105 Q7104
IC6304 Q7121 Q7120 Q7115 Q7122 IC7101 IC7102 Q7103 IC7504
Q6322 Q6324 Q6356 Q6351 Q6357 Q6355 Q2810 Q2801 Q2802 Q2803–Q2805 Q2809
Q6313 Q6353 Q6321 IC6301 Q6320
Q6314–Q6319 Q6353 Q6340 Q6330 Q6306 Q6301 Q6303 Q6304 IC2701 Q2811 Q2711 IC2702 Q2715 Q2808 IC2801
Q6331–Q6333 Q6343 IC6302 IC6303 Q6346–Q6348 Q2717 Q2720 Q2721 Q2723 Q2705 Q2719
Q6334 Q6361–Q6363 Q6337–Q6339 Q2707 Q2722 Q2706 Q2701–Q2704 Q2708

A-b

SIDE A

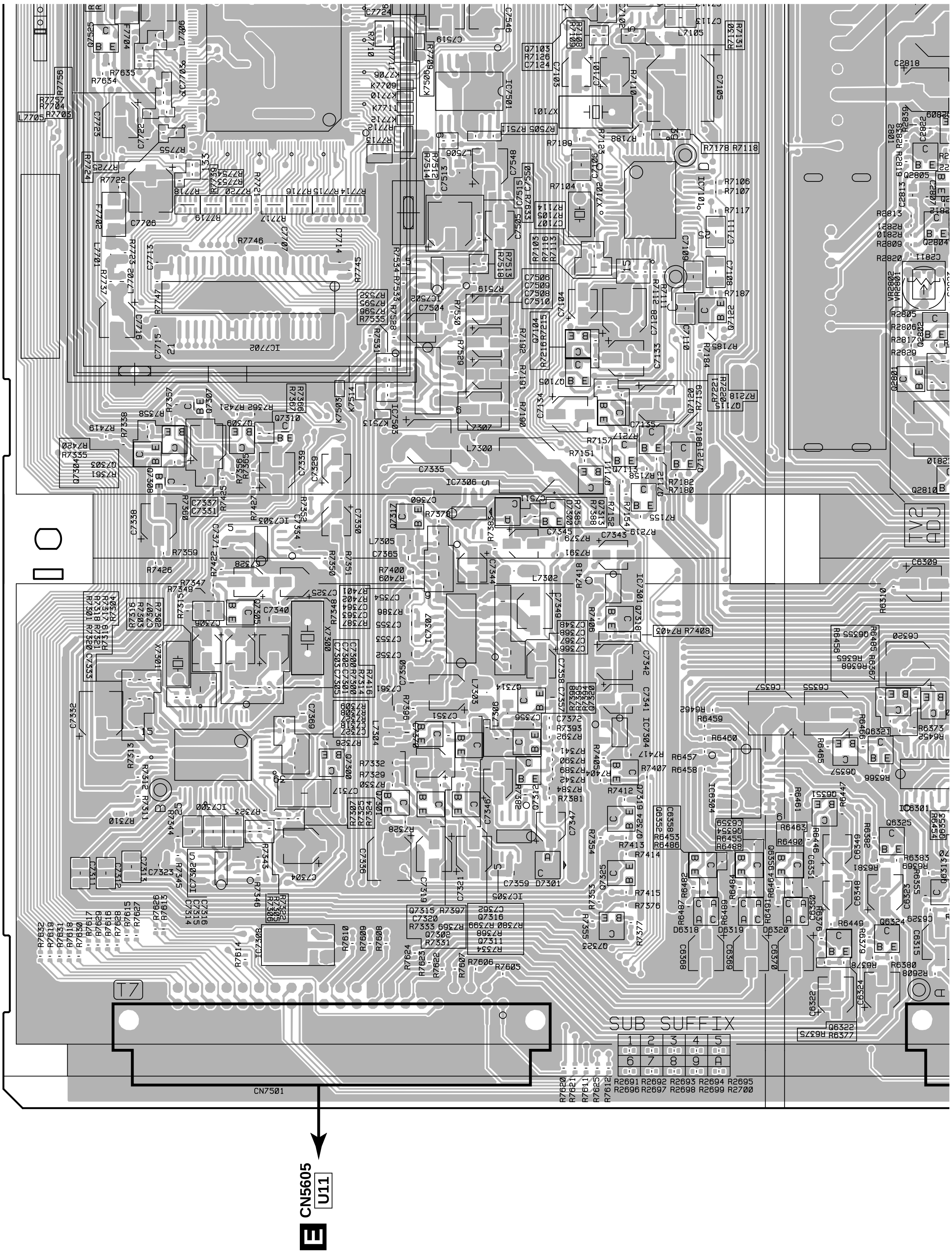

P CN201 E1
B CN6204 A4
To SERIAL PROGRAMER (Flash u-COM. Writer)
To DIGITAL TUNER SH-D09
E CN5256 U14
S CN5001 B1
I CN1654 H5
P CN202 E2
To RF SW
B CN6006 A5
(ANP1947–B)
GND
GND
GND
5V
5V
9V
12V
STB5V
P.GND
AC.CLK
RELAY
P.GND
REM OUT
STB5V
P.GND
RESET
PGM_OE
F_SDA
F_SCL
STB5V
VPP
F_BUSY
P.GND
STB5V
D_RST
D_BUSY
D_INT
D_SDA
D_SCL
LED ON/OFF
KEY
STB5V
P.GND
12V
DPO
DTV LED
TMR LED
CPU_RST
CSDA
CSCL
CBUSY
GND
GND
C.MUTE
5VSTB
5V
9V
30V
GND
GND
AWV-1800-A
1805-A
1812-A
24LC 32A
RESET
IF1
IF2
Q7518 Q7517
Q7515 Q7514
IC7704
Q7501
Q7529
Q7508–Q7513
Q7519–Q7524
IC7006
Q7124 Q7006 Q7016
Q7006 Q7013–Q7015 Q7003 Q7001
Q7009 Q7004
Q7005 IC7003
IC7001
IC7002
Q7002
IC7504 Q7530 IC7505 Q7117 Q7101 Q7125 Q7043 Q7010 IC7004
IC2802
Q2459 Q2450
Q2461–Q2465
IC2801 IC2703 IC2704
Q2719
Q2710 Q2712–Q2714
Q2451–Q2457
IC2452
IC2451 IC2454

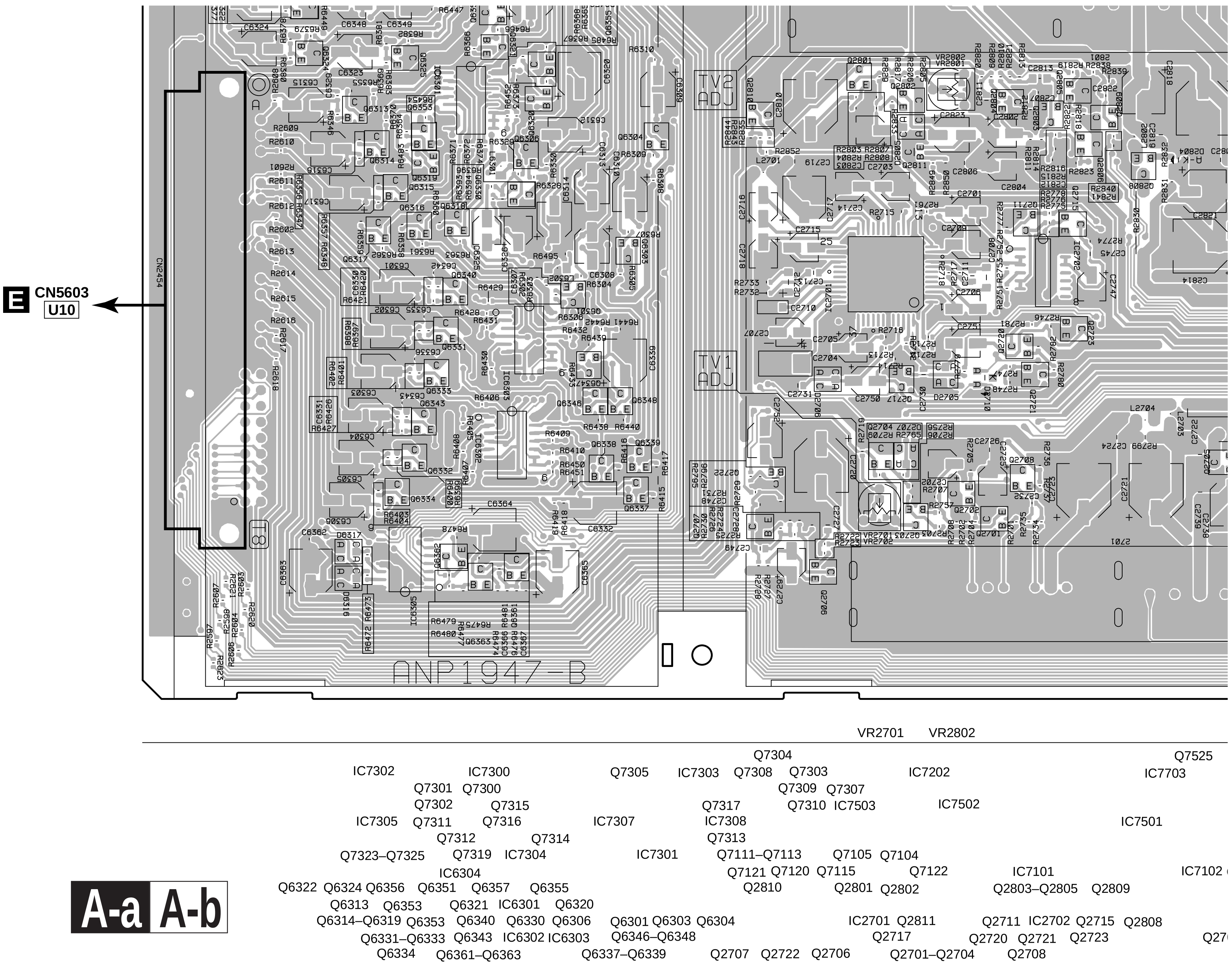

Large size PCB diagram
A-a
A-b
Guide page
A-a
A-b
A-a
A-b
Detailed page

SIDE A

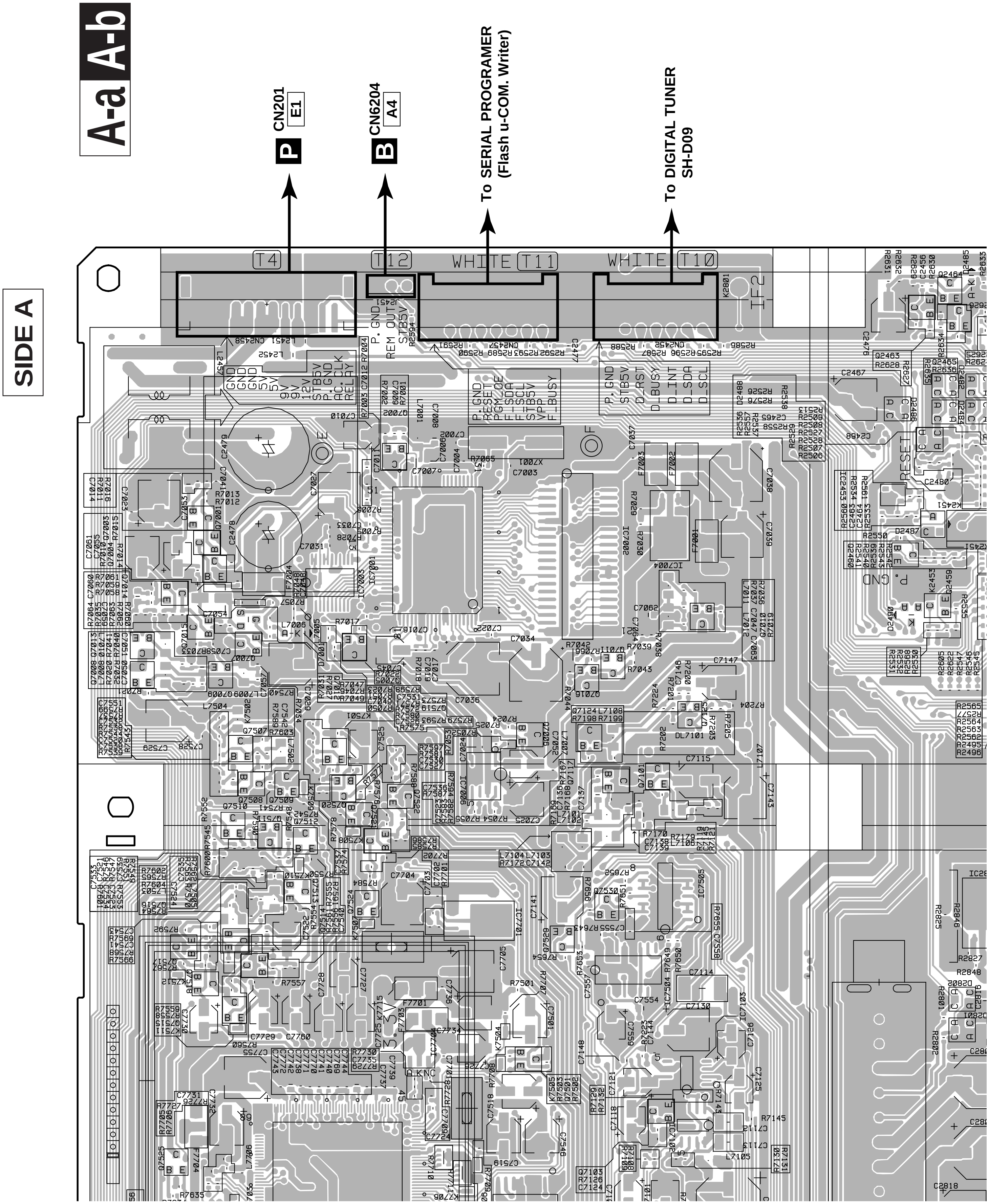
A-a A-b

A SIGNAL ASSY

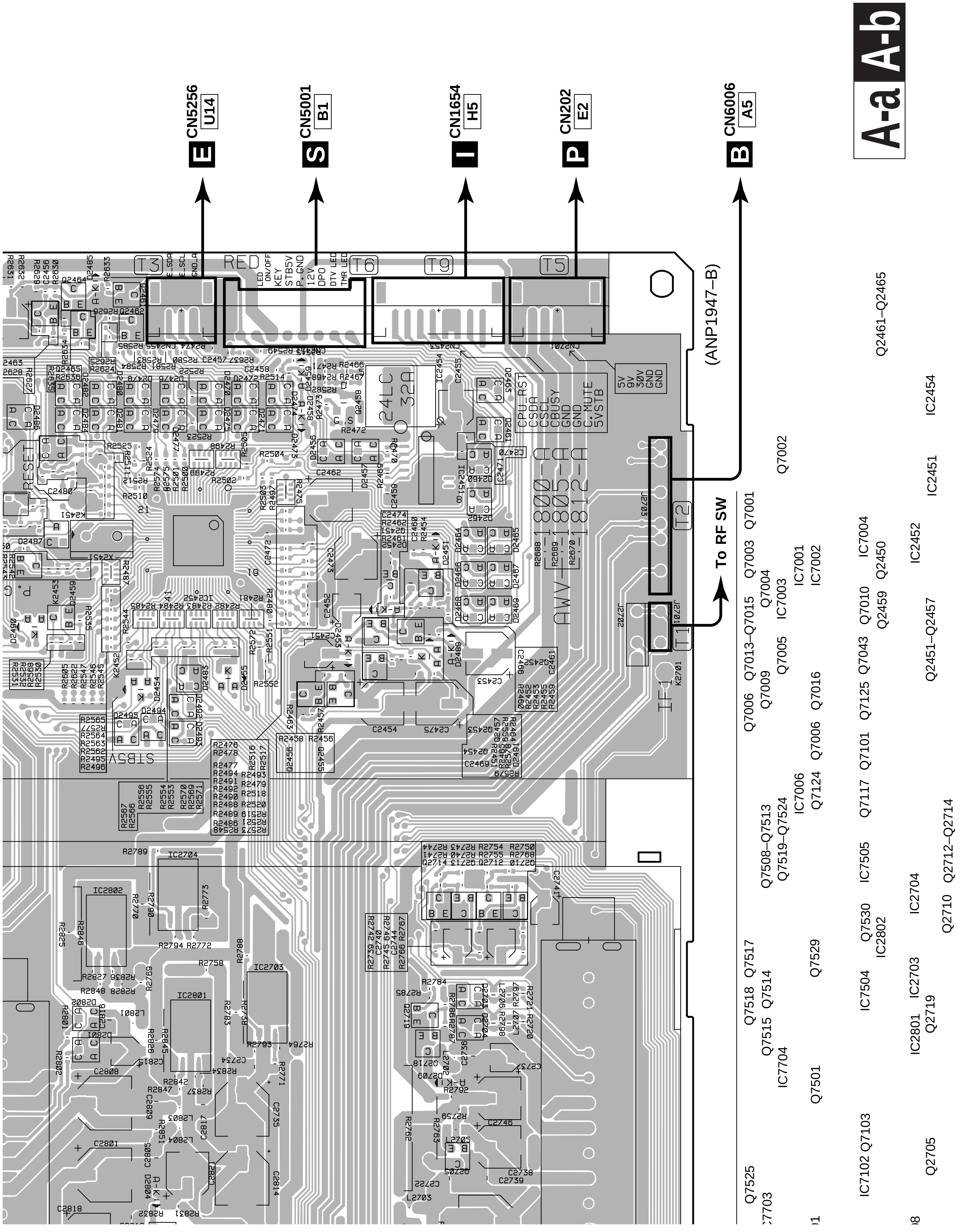

T7
CN7501
SUB SUFFIX
1 2 3 4 5
6 7 8 9 A
R2691 R2692 R2693 R2694 R2695
R2696 R2697 R2698 R2699 R2700
IC7702
IC7501
IC7306
IC7307
IC7301
IC6304
IC6301
TV2 ADJ
CN5605
U11
E


E CN5603 U10
CN2454
ANP1947-B
TV1 ADJ
TV2 ADJ
VR2701 VR2802
Q7525
IC7703
IC7501
IC7102
IC7502
IC7202
Q7304
Q7308 Q7303
Q7309 Q7307
Q7310 IC7503
IC7303
Q7317
IC7308
Q7313
Q7111–Q7113
Q7121 Q7120 Q7115
Q2810
Q7105 Q7104
Q7122
Q2801 Q2802
IC7101
Q2803–Q2805 Q2809
IC2701 Q2811
Q2717
Q2701–Q2704
Q2711 IC2702 Q2715 Q2808
Q2720 Q2721 Q2723
Q2708
Q2707 Q2722 Q2706
Q7305
IC7307
IC7301
Q6301 Q6303 Q6304
Q6346–Q6348
Q6337–Q6339
IC7302
IC7300
Q7301 Q7300
Q7302
Q7315
IC7305 Q7311
Q7316
Q7312
Q7314
Q7323–Q7325
Q7319 IC7304
IC6304
Q6322 Q6324 Q6356 Q6351 Q6357 Q6355
Q6313 Q6353 Q6321 IC6301 Q6320
Q6314–Q6319 Q6353 Q6340 Q6330 Q6306
Q6331–Q6333 Q6343 IC6302 IC6303
Q6334 Q6361–Q6363

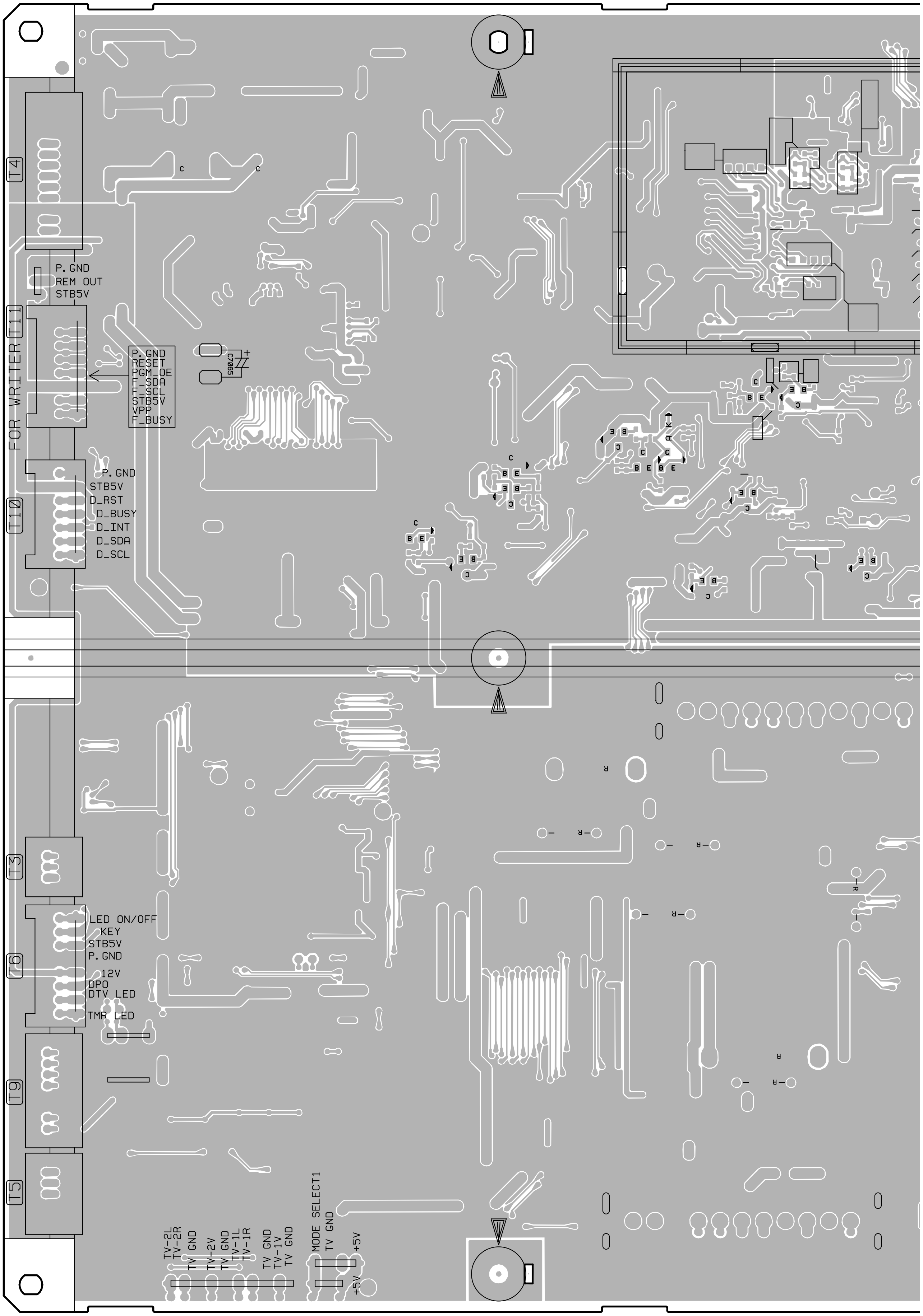
A-a A-b


A-a A-b
SIDE A
P CN201 E1
B CN6204 A4
To SERIAL PROGRAMER (Flash u-COM. Writer)
To DIGITAL TUNER SH-D09
T4
T12
WHITE T11
WHITE T10
CN2458
CN2451
CN2457
CN2452
GND
GND
GND
5V
9V
9V
12V
STB5V
P.GND
AC.CLK
RELAY
P.GND
REM OUT
STB5V
P.GND
RESET
PGM_OE
F_SDA
F_SCL
STB5V
VPP
F_BUSY
P.GND
STB5V
D_RST
D_BUSY
D_INT
D_SDA
D_SCL
IC7001
IC7002
IC7003
IC7004
IC7505
IC7701
IC7103
X7001
K2801
IF2
RESET
P.GND

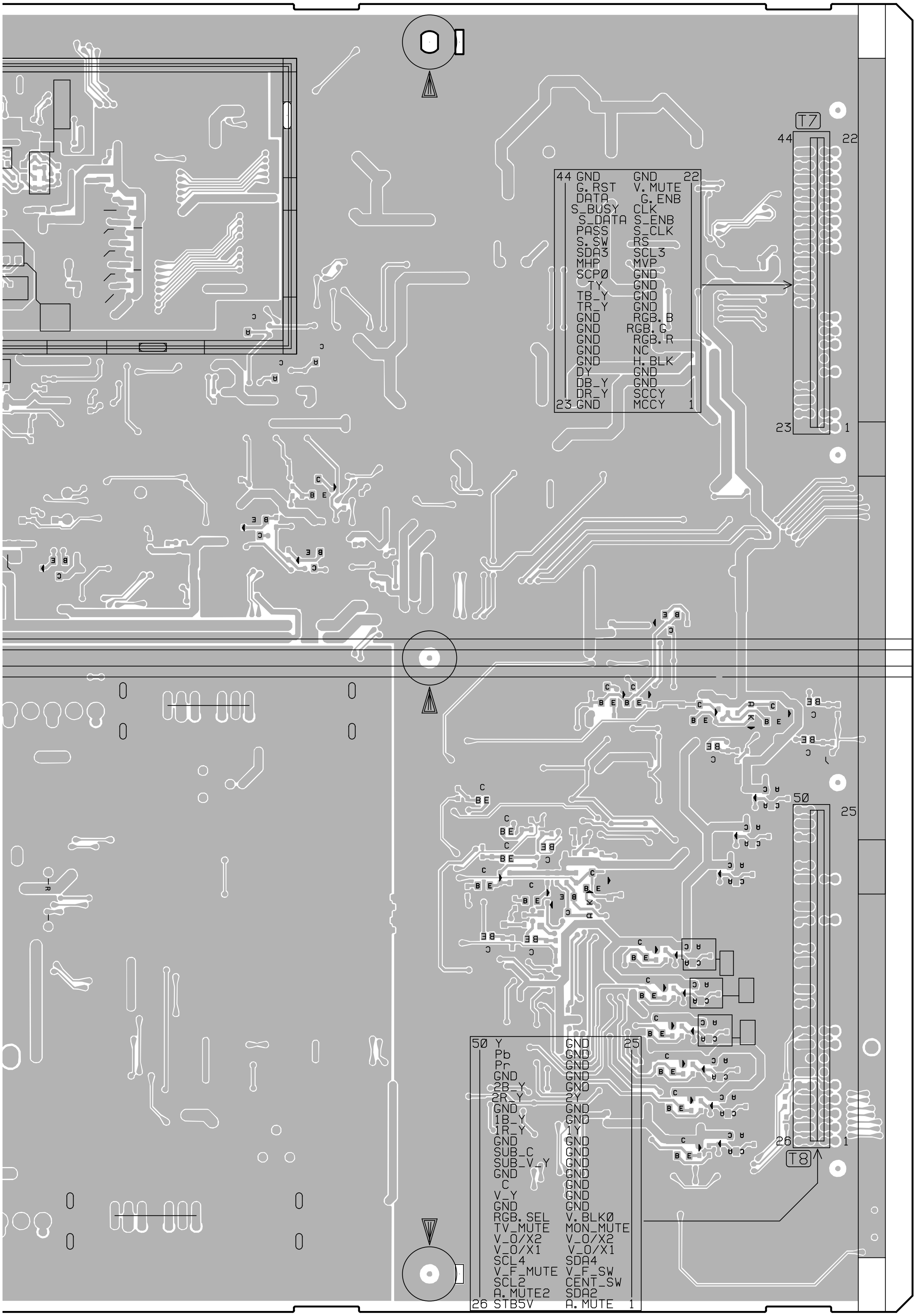
A
B
C
D


A-a A-b
E CN5256 U14
S CN5001 B1
I CN1654 H5
P CN202 E2
B CN6006 A5
(ANP1947–B)
To RF SW
Q2461–Q2465
IC2454
Q7002
IC2451
Q7001
Q7003
Q7004
IC7001
IC7002
IC7003
IC7004
Q2450
IC2452
Q7013–Q7015
Q7005
Q7010
Q2459
Q2451–Q2457
Q7009
Q7043
Q7006
Q7016
Q7125
Q7124
Q7101
IC7006
Q7117
Q7508–Q7513
Q7519–Q7524
IC7505
Q2712–Q2714
IC2704
Q7530
IC2802
Q2710
Q7517
Q7529
Q7518
Q7514
IC7504
IC2703
Q2719
Q7515
IC2801
IC7704
Q7501
IC7103
Q7525
IC7102
Q2705

A SIGNAL ASSY

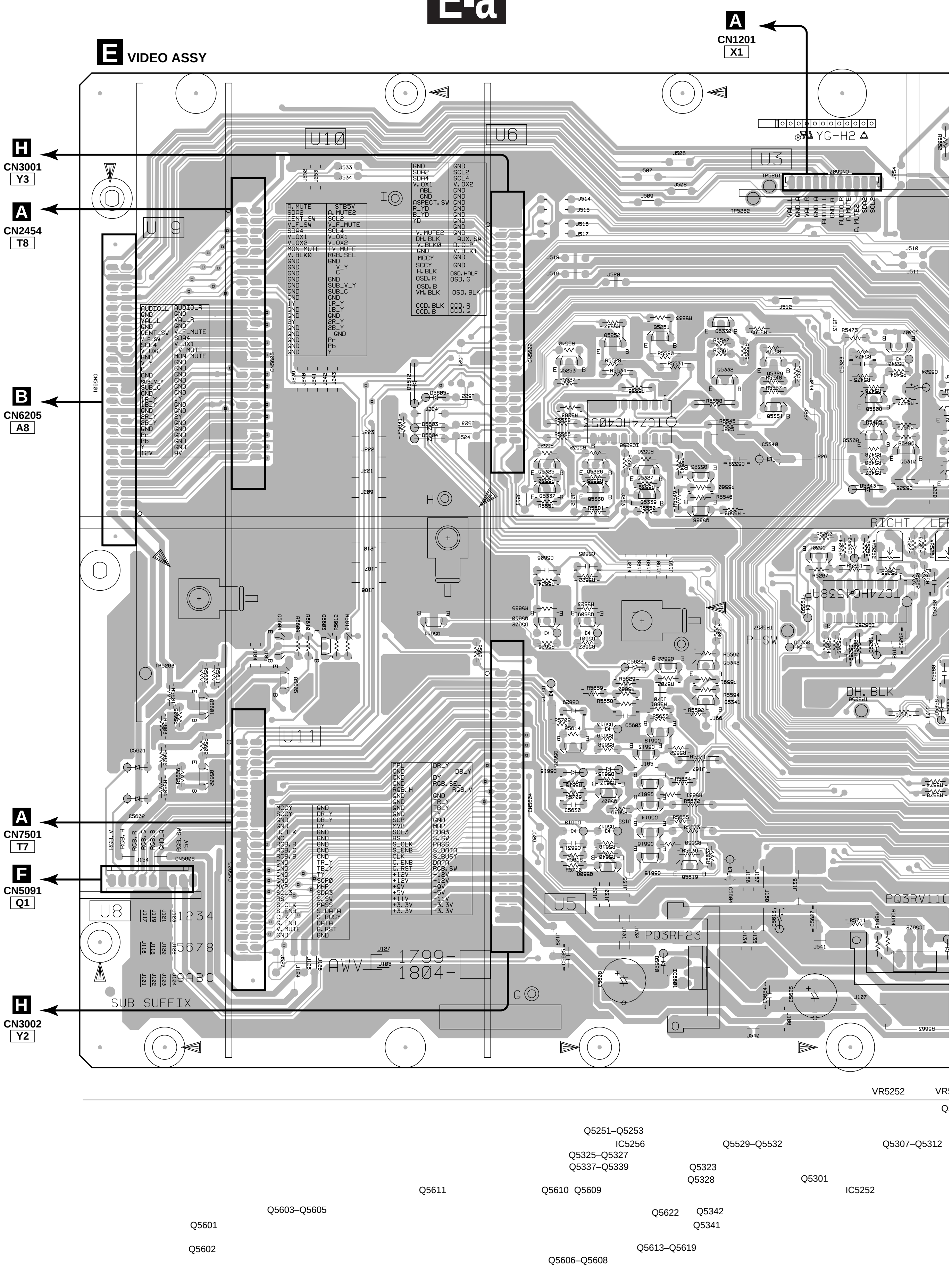

A
B
C
D
T4
P.GND
REM OUT
STB5V
T11
FOR WRITER
P.GND
RESET
PGM_OE
F_SDA
F_SCL
STB5V
VPP
F_BUSY
C7065
T10
P.GND
STB5V
D_RST
D_BUSY
D_INT
D_SDA
D_SCL
T3
T6
LED ON/OFF
KEY
STB5V
P.GND
12V
DPO
DTV LED
TMR LED
T9
T5
TV-2L
TV-2R
TV GND
TV-2V
TV GND
TV-1L
TV-1R
TV GND
TV-1V
TV GND
MODE SELECT1
TV GND
+5V
+5V
C
B
E
K
R

SIDE B


T7
44
22
44 GND GND 22
G.RST V.MUTE
DATA G.ENB
S_BUSY CLK
S_DATA S_ENB
PASS S_CLK
S.SW RS
SDA3 SCL3
MHP MVP
SCP0 GND
TY GND
TB_Y GND
TR_Y GND
GND RGB.B
GND RGB.G
GND RGB.R
GND NC
GND H.BLK
DY GND
DB_Y GND
DR_Y SCCY
23 GND MCCY 1
23
1
50
25
26
1
T8
50 Y GND 25
Pb GND
Pr GND
GND GND
2B_Y GND
2R_Y 2Y
GND GND
1B_Y GND
1R_Y 1Y
GND GND
SUB_C GND
SUB_V_Y GND
GND GND
C GND
V_Y GND
GND GND
RGB.SEL V.BLK0
TV_MUTE MON_MUTE
V_O/X2 V_O/X2
V_O/X1 V_O/X1
SCL4 SDA4
V_F_MUTE V_F_SW
SCL2 CENT_SW
A.MUTE2 SDA2
26 STB5V A.MUTE 1
A
B
C
D

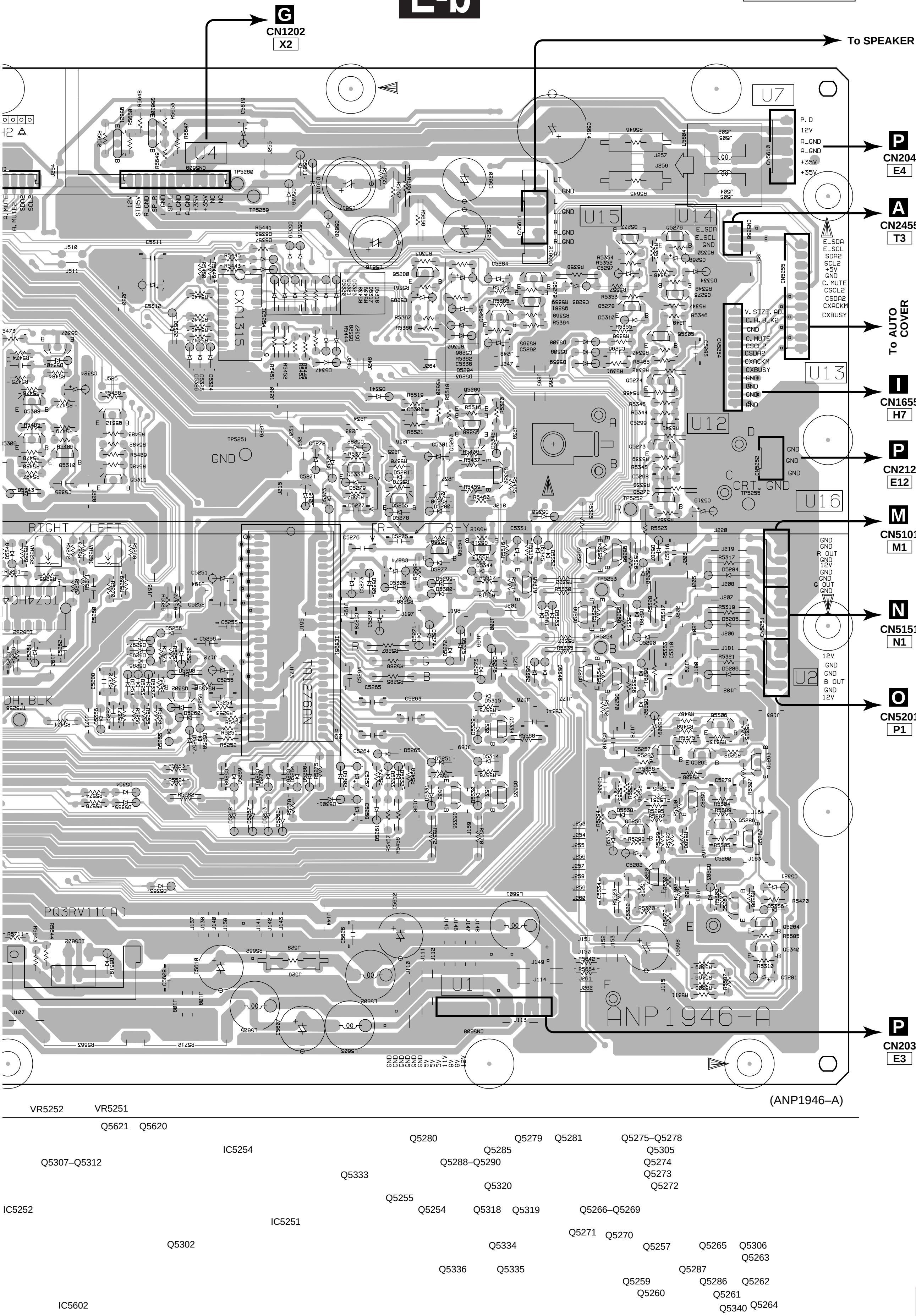
4.3 VIDEO ASSY

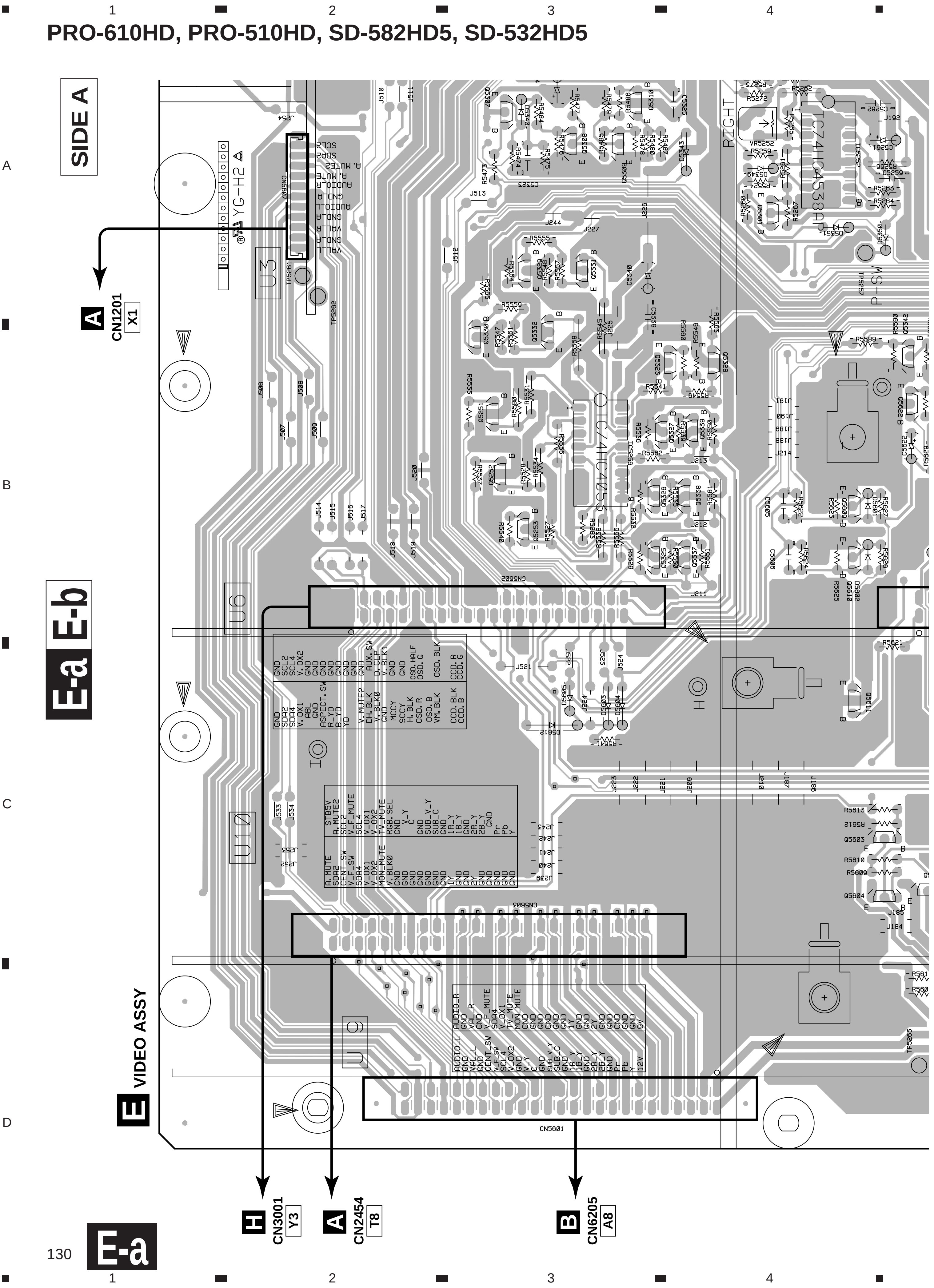
E-a


E VIDEO ASSY
A
CN1201
X1
H
CN3001
Y3
A
CN2454
T8
B
CN6205
A8
A
CN7501
T7
F
CN5091
Q1
H
CN3002
Y2
U10
U6
U9
U3
U11
U8
U5
YG-H2
CN5601
CN5602
CN5603
CN5604
CN5605
CN5606
TC74HC4053
TC74HC4538AP
PQ3RF23
PQ3RV11
RIGHT
DH.BLK
P-SW
SUB SUFFIX
AWV 1799-1804-
1234
5678
9ABC
H
G
VR5252
Q5251–Q5253
IC5256
Q5529–Q5532
Q5307–Q5312
Q5325–Q5327
Q5337–Q5339
Q5323
Q5328
Q5301
Q5611
Q5610
Q5609
IC5252
Q5603–Q5605
Q5622
Q5342
Q5601
Q5341
Q5602
Q5613–Q5619
Q5606–Q5608
IC5601
IC5602

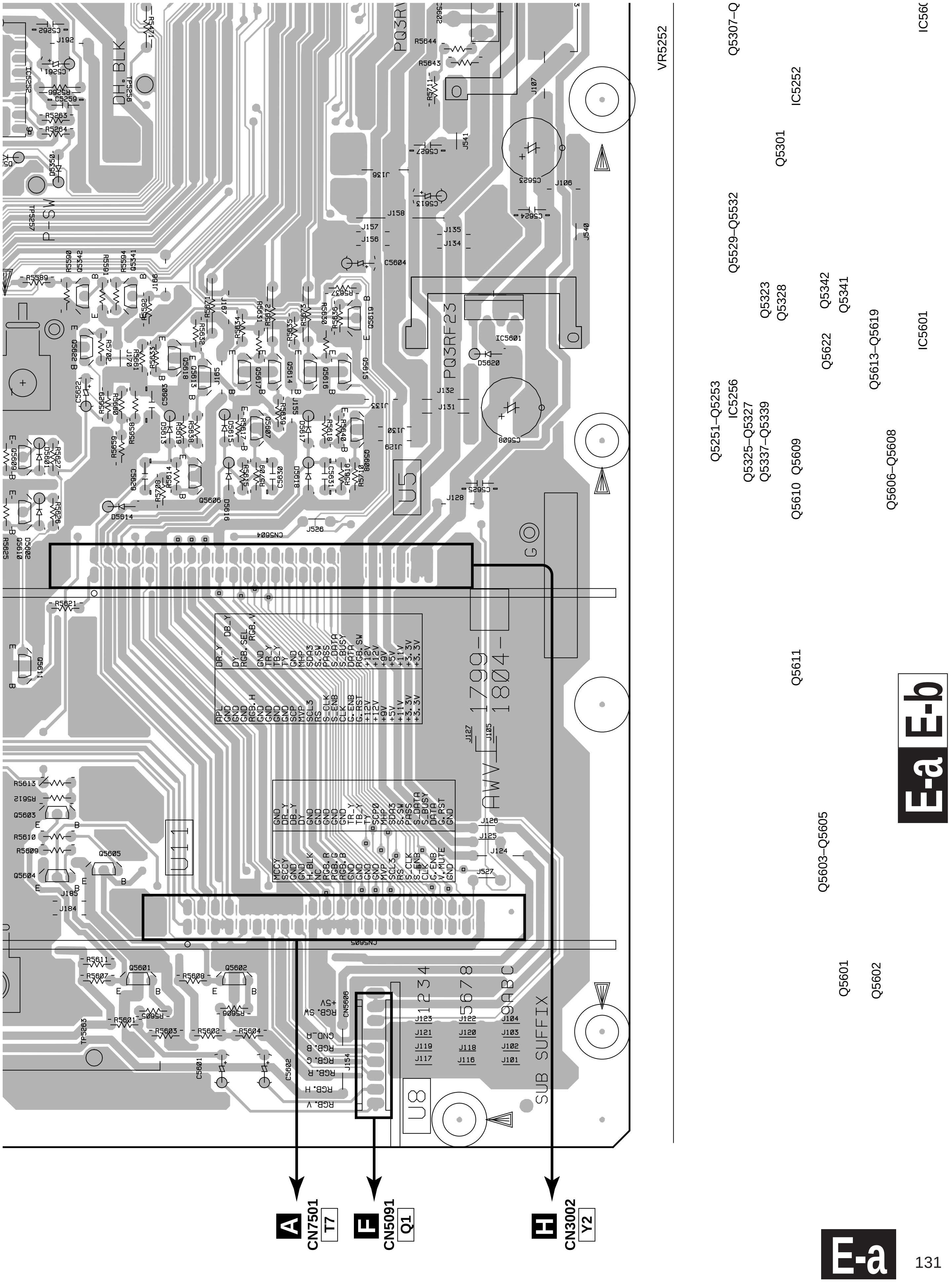
E-b

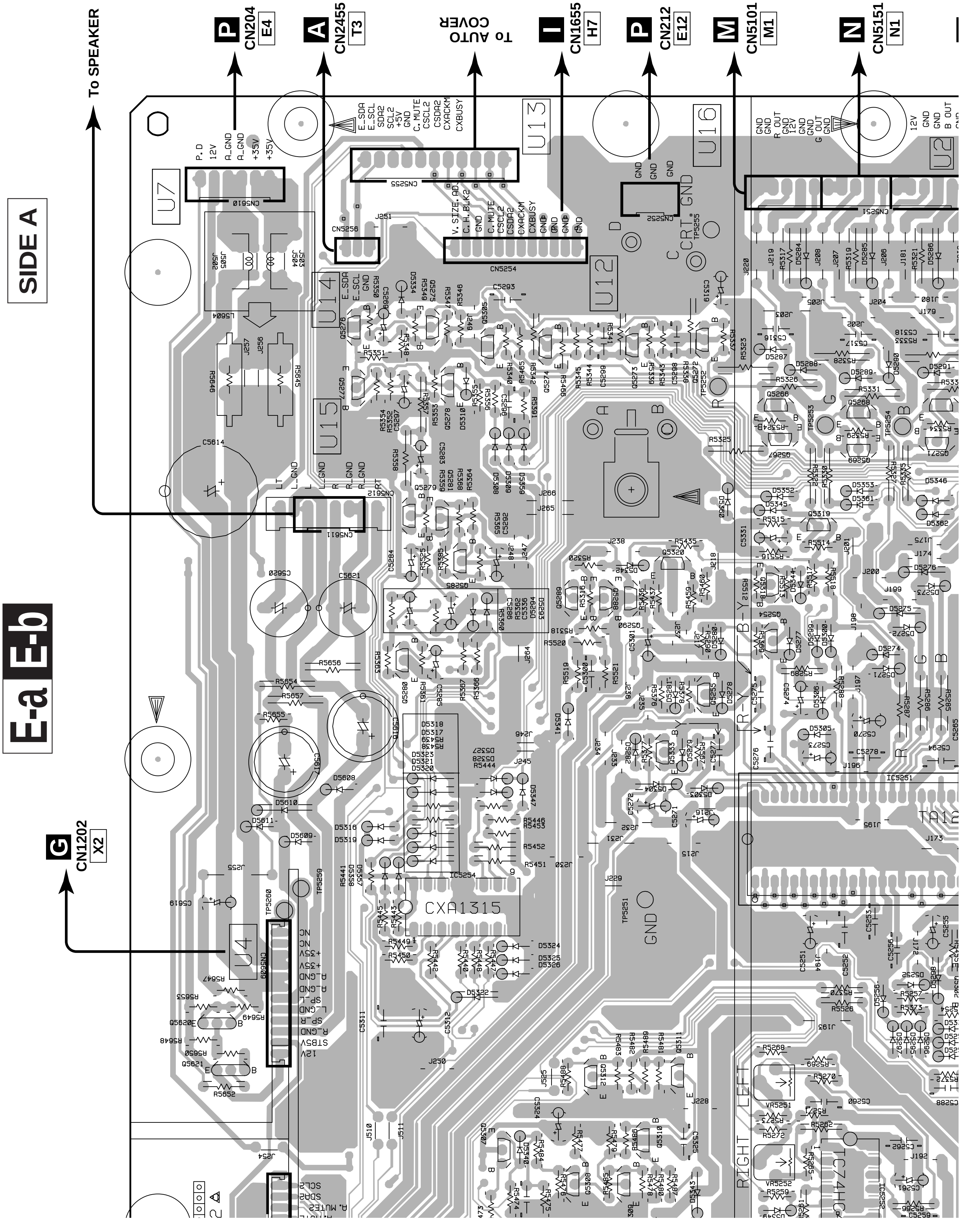
SIDE A

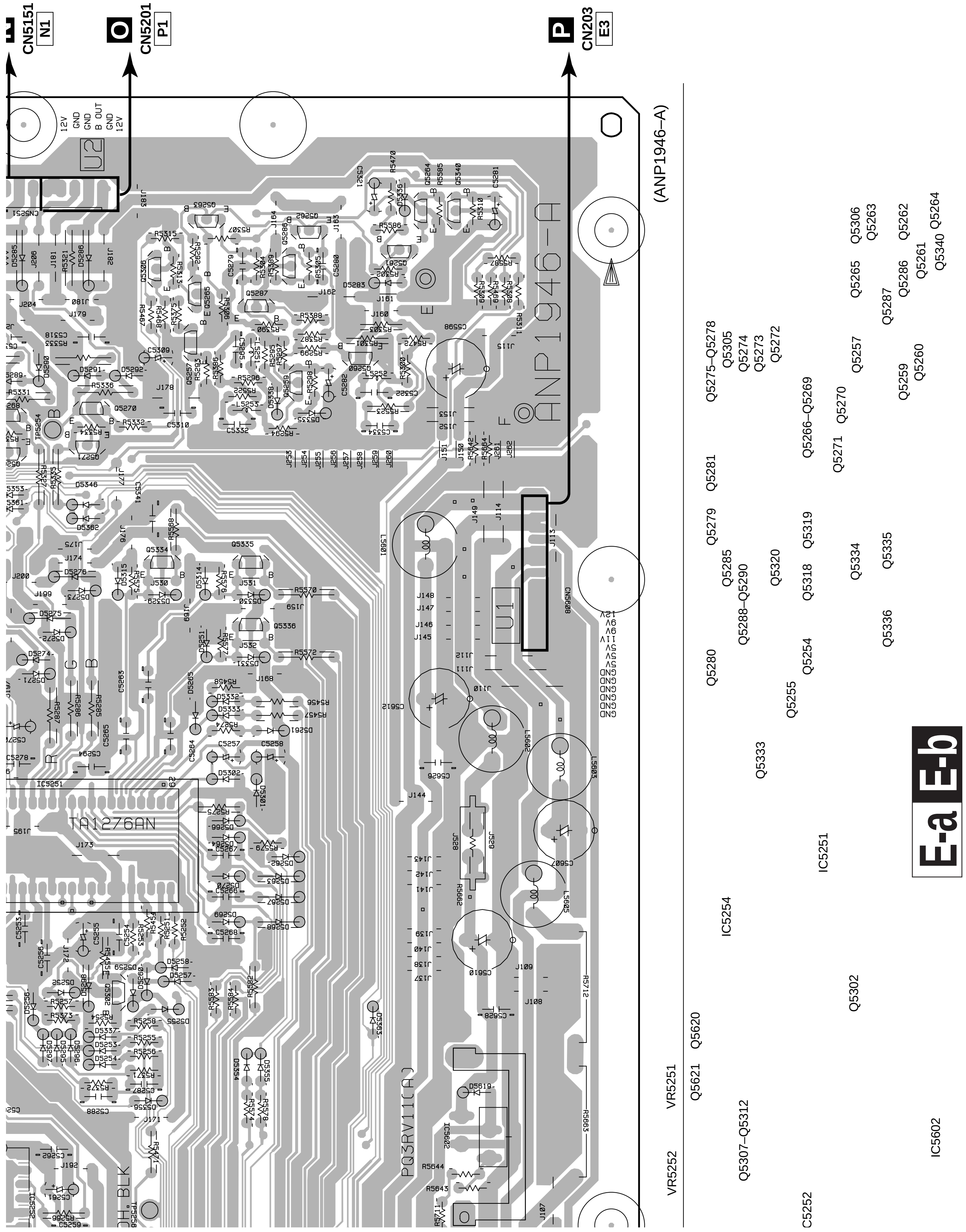

G
CN1202
X2
To SPEAKER
P
CN204
E4
A
CN2455
T3
To AUTO COVER
I
CN1655
H7
P
CN212
E12
M
CN5101
M1
N
CN5151
N1
O
CN5201
P1
P
CN203
E3
U4
U7
U15
U14
U13
U12
U16
U2
U1
CXA1315
TA1276AN
ANP1946-A
PQ3RV11(A)
RIGHT
LEFT
GND
CRT. GND
DH. BLK
(ANP1946–A)
VR5252
VR5251
Q5621
Q5620
Q5307–Q5312
IC5254
Q5280
Q5279
Q5281
Q5275–Q5278
Q5285
Q5305
Q5288–Q5290
Q5274
Q5333
Q5273
Q5320
Q5272
Q5255
IC5252
Q5254
Q5318
Q5319
Q5266–Q5269
IC5251
Q5271
Q5270
Q5302
Q5334
Q5257
Q5265
Q5306
Q5263
Q5336
Q5335
Q5287
Q5259
Q5286
Q5262
Q5260
Q5261
Q5340
Q5264
IC5602


1
2
3
4
A
B
C
D
SIDE A
E VIDEO ASSY
E-a
E-b
A CN1201 X1
H CN3001 Y3
A CN2454 T8
B CN6205 A8
CN5601
CN5602
CN5603
CN5604
TC74HC4538AP
TC74HC4053
RIGHT
U3
U6
U9
U10
H
I
P-SW
YG-H2
SCL2
SDA2
A.MUTE2
A.MUTE
AUDIO_R
GND_A
AUDIO_L
GND_A
VAL_R
GND_A
VAL_L
STB5V
A.MUTE2
SCL2
V_F_MUTE
SCL4
V_OX1
V_OX2
TV_MUTE
RGB_SEL
GND
V_Y
C
GND
SUB_V_Y
SUB_C
GND
1R_Y
1B_Y
2R_Y
2B_Y
GND
Pr
Pb
Y
A.MUTE
SDA2
CENT_SW
V_F_SW
SDA4
V_OX1
V_OX2
MON_MUTE
V_BLK0
AUDIO_L
GND
VAL_L
GND
CENT_SW
V_F_SW
SCL4
V_OX2
GND
V_Y
C
GND
SUB_V_Y
SUB_C
GND
1R_Y
1B_Y
GND
2R_Y
2B_Y
GND
Pr
Pb
Y
12V
AUDIO_R
GND
VAL_R
GND
V_F_MUTE
SDA4
V_OX1
TV_MUTE
MON_MUTE
GND
1Y
2Y
9V
GND
SDA2
SDA4
V.OX1
ABL
GND
ASPECT.SW
R.YD
B.YD
YD
V.MUTE2
DH.BLK
V.BLK0
GND
MCCY
SCCY
H.BLK
OSD.R
OSD.B
VM.BLK
CCD.BLK
CCD.B
GND
SCL2
SCL4
V.OX2
AUX.SW
D.CLP
V.BLK1
OSD.HALF
OSD.G
OSD.BLK
CCD.R
CCD.G

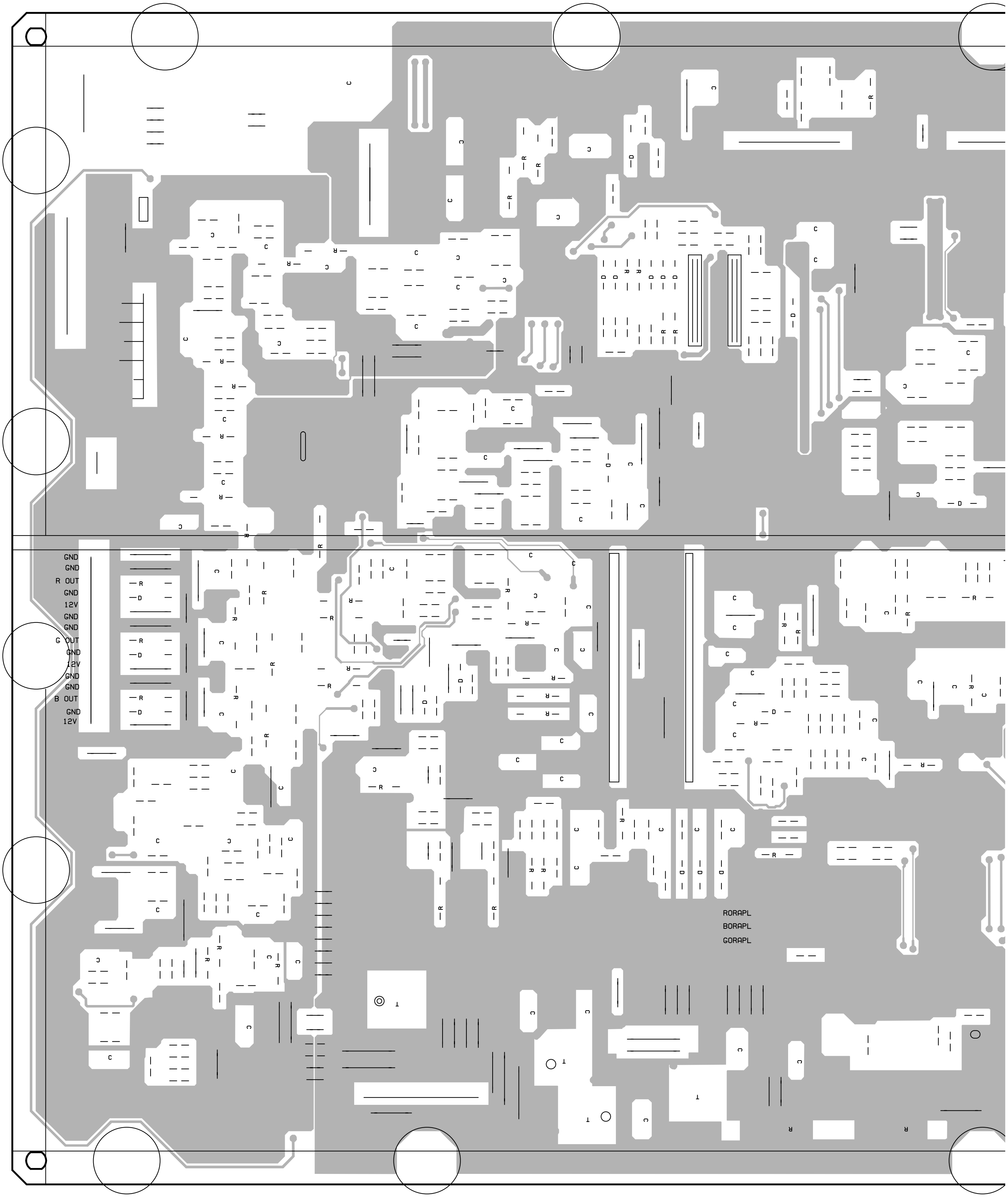
]


VR5252
Q5307–Q
IC560
IC5252
Q5301
Q5529–Q5532
Q5323
Q5328
Q5342
Q5341
Q5613–Q5619
IC5601
Q5622
Q5251–Q5253
IC5256
Q5325–Q5327
Q5337–Q5339
Q5609
Q5610
Q5606–Q5608
Q5611
E-a
E-b
Q5603–Q5605
Q5601
Q5602
PQ3RF23
IC5601
U5
U11
U8
AWV 1799-
1804-
SUB SUFFIX
CN5604
CN5605
CN5606
A
CN7501
T7
F
CN5091
Q1
H
CN3002
Y2

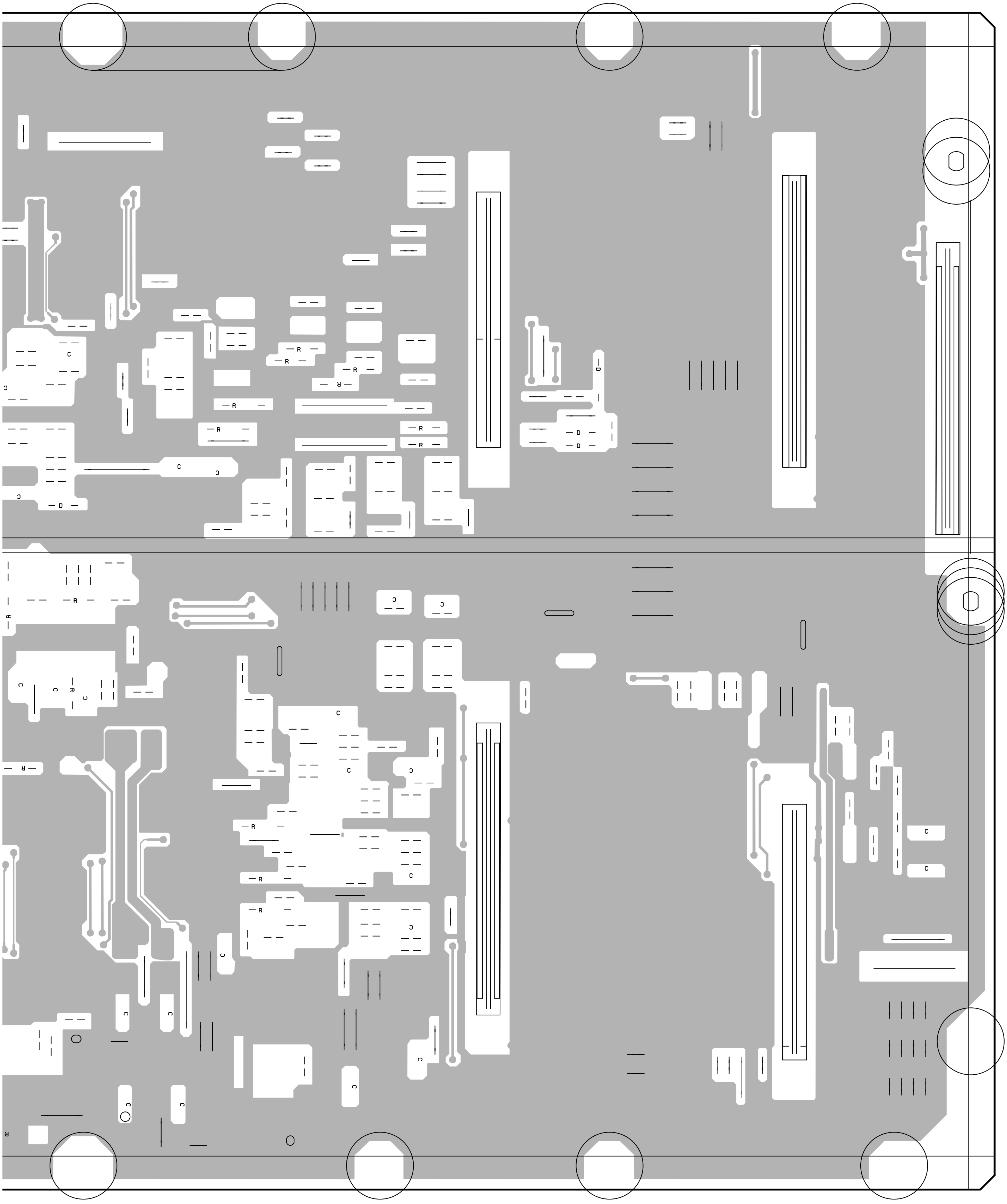

1
2
3
4
A
B
C
D
To SPEAKER
P CN204 E4
A CN2455 T3
To AUTO COVER
I CN1655 H7
P CN212 E12
M CN5101 M1
N CN5151 N1
G CN1202 X2
SIDE A
E-a E-b
U7
U12
U13
U14
U15
U16
U4
CN5610
CN5255
CN5256
CN5254
CN5252
CN5251
CN5612
CN5611
CN5609
IC5254
IC5251
CXA1315
P.D
12V
A_GND
+35V
E.SDA
E.SCL
SDA2
SCL2
+5V
GND
C.MUTE
CSCL2
CSDA2
CXACKM
CXBUSY
V.SIZE.ADJ
C.H.BLK2
CRT.GND
R OUT
G OUT
B OUT
L GND
R GND
LT
RT
NC
+35V
A_GND
SP_L
L_GND
SP_R
R_GND
STBSV
12V
SCL2
SDA2
A.MUTE2
C5614
C5620
C5621
C5617
C5619
C5616
VR5251
VR5252
TC74HC
GND
R-Y
B-Y
RIGHT
LEFT


N CN5151 N1
O CN5201 P1
P CN203 E3
12V
GND
GND
B OUT
GND
12V
U2
U1
CN5251
CN5608
ANP1946-A
(ANP1946–A)
TA1276AN
IC5251
PQ3RV11(A)
12V
9V
11V
5V
5V
GND
GND
GND
GND
GND
Q5306
Q5263
Q5262
Q5264
Q5340
Q5261
Q5286
Q5265
Q5287
Q5257
Q5259
Q5260
Q5275–Q5278
Q5305
Q5274
Q5273
Q5272
Q5266–Q5269
Q5270
Q5271
Q5281
Q5279
Q5285
Q5288–Q5290
Q5320
Q5319
Q5318
Q5334
Q5335
Q5336
Q5280
Q5254
Q5255
Q5333
IC5251
IC5254
Q5302
Q5620
Q5621
VR5251
VR5252
Q5307–Q5312
IC5602
C5252
E-a
E-b

E VIDEO ASSY


GND
GND
R OUT
GND
12V
GND
GND
G OUT
GND
12V
GND
GND
B OUT
GND
12V
RORAPL
BORAPL
GORAPL

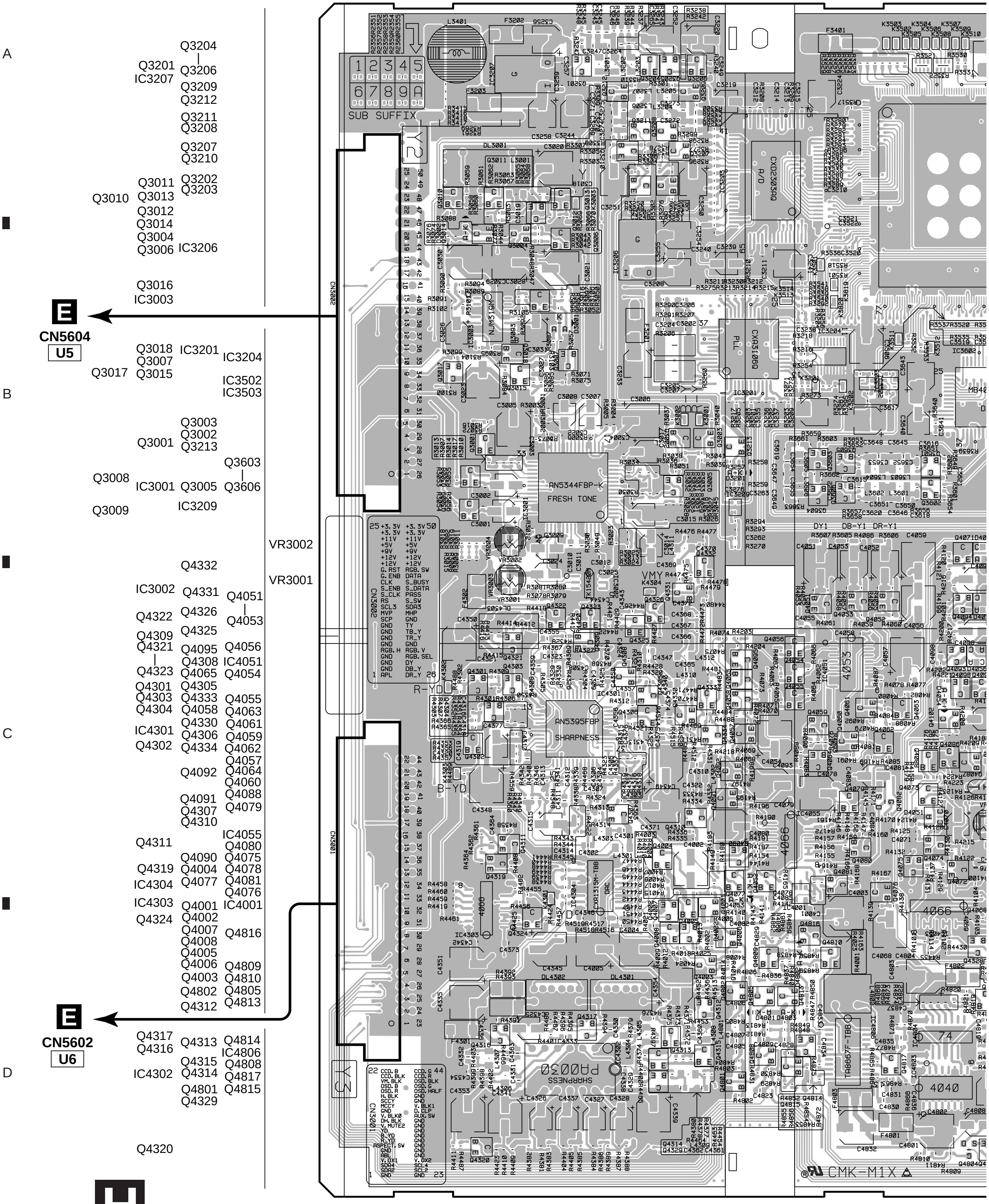
SIDE B



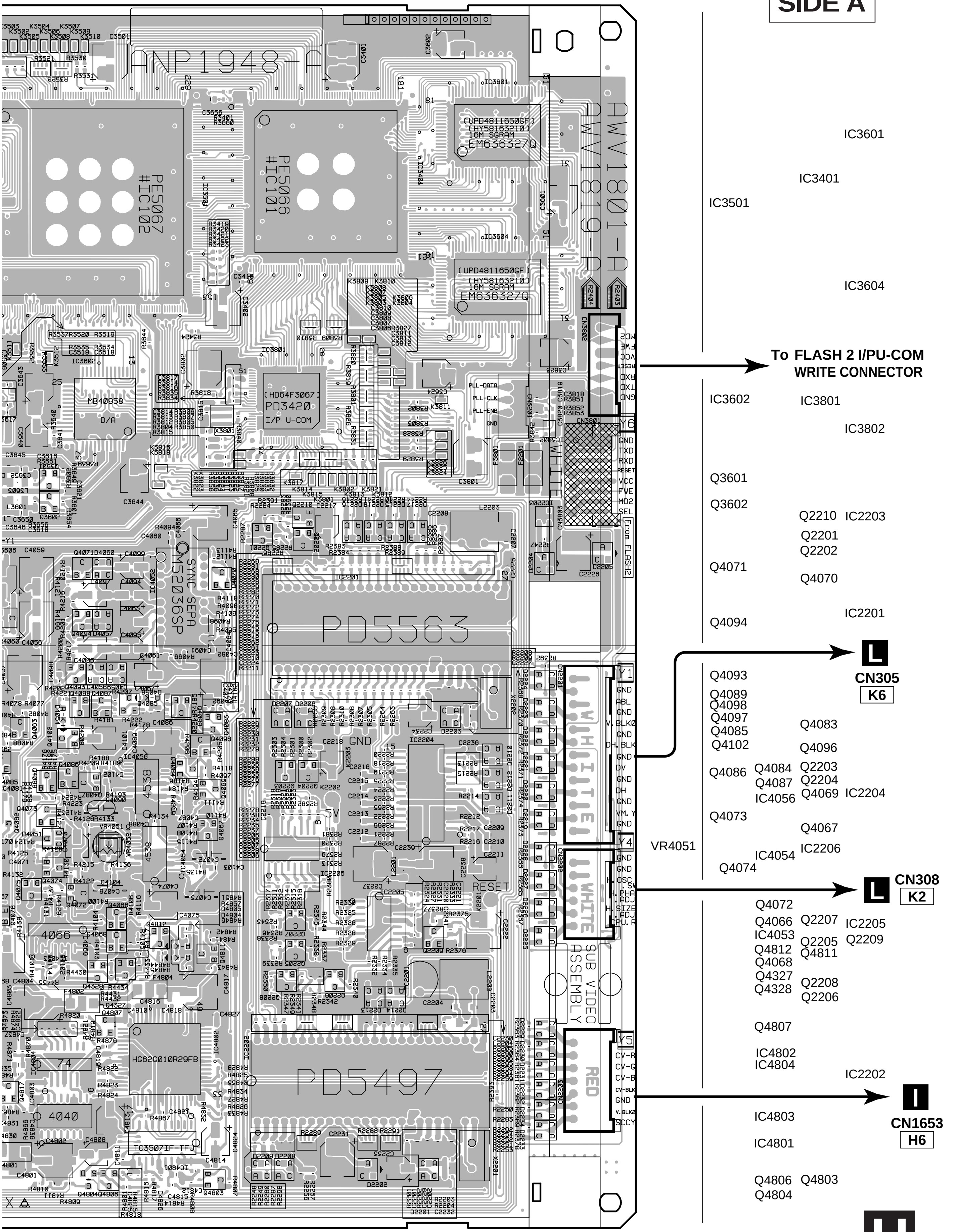
(ANP1946–A)

4.4 SUB VIDEO SERVICE ASSY (For PRO-610HD, PRO-510HD)

H SUB VIDEO SERVICE ASSY

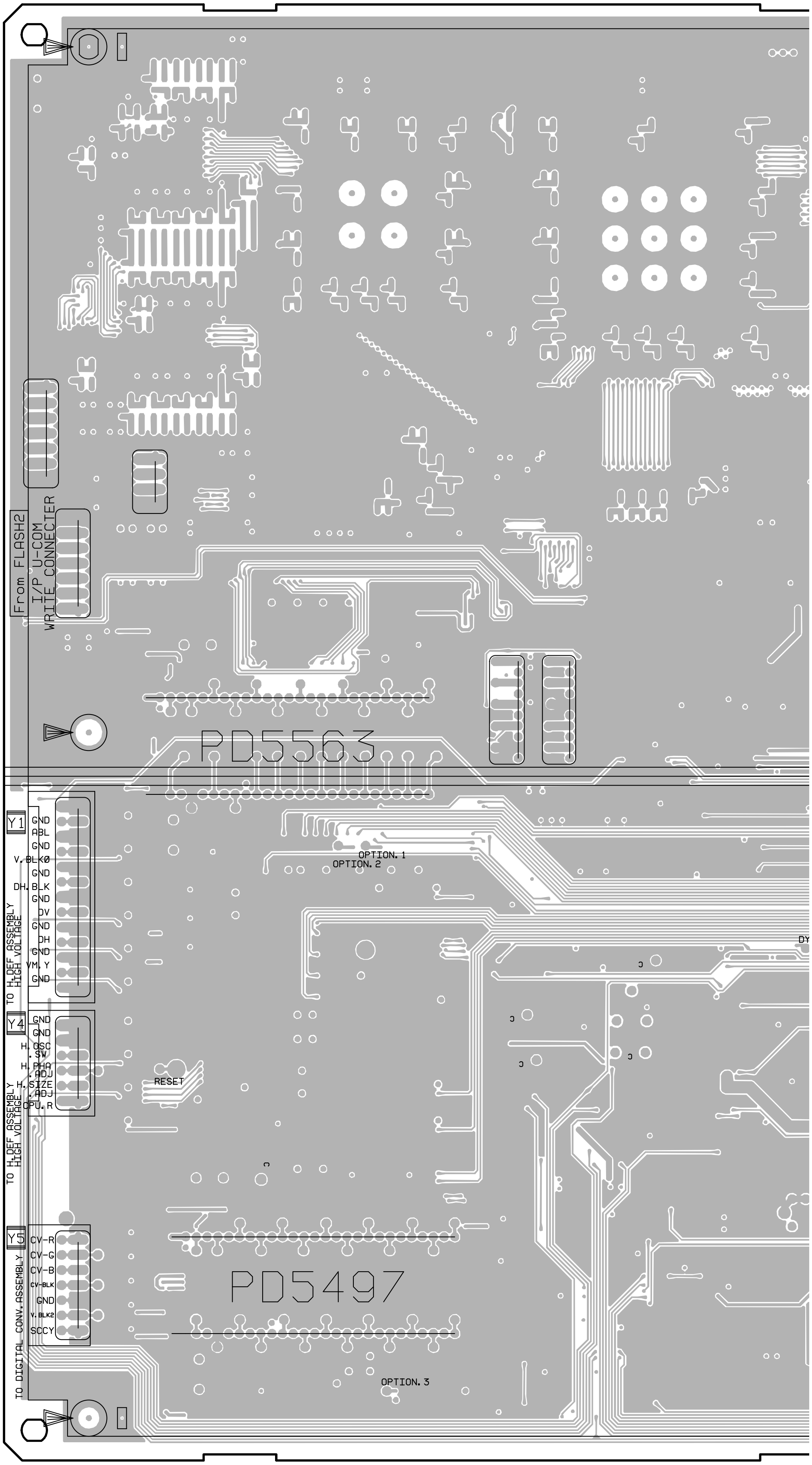

A
B
C
D
Q3204
Q3206
Q3201
IC3207
Q3209
Q3212
Q3211
Q3208
Q3207
Q3210
Q3011
Q3202
Q3203
Q3010
Q3013
Q3012
Q3014
Q3004
Q3006
IC3206
Q3016
IC3003
E
CN5604
U5
Q3018
IC3201
Q3007
IC3204
Q3017
Q3015
IC3502
IC3503
Q3003
Q3002
Q3001
Q3213
Q3603
Q3008
IC3001
Q3005
Q3606
IC3209
Q3009
VR3002
VR3001
Q4332
IC3002
Q4331
Q4051
Q4053
Q4322
Q4326
Q4325
Q4309
Q4321
Q4095
Q4056
Q4308
IC4051
Q4323
Q4065
Q4054
Q4301
Q4305
Q4303
Q4333
Q4055
Q4304
Q4058
Q4063
Q4330
Q4061
IC4301
Q4306
Q4059
Q4302
Q4334
Q4062
Q4057
Q4092
Q4064
Q4060
Q4088
Q4091
Q4079
Q4307
Q4310
IC4055
Q4311
Q4080
Q4090
Q4075
Q4319
Q4004
Q4078
IC4304
Q4077
Q4081
Q4076
IC4303
Q4001
IC4001
Q4324
Q4002
Q4007
Q4816
Q4008
Q4005
Q4006
Q4809
Q4003
Q4810
Q4802
Q4805
Q4312
Q4813
E
CN5602
U6
Q4317
Q4313
Q4814
Q4316
IC4806
Q4315
Q4808
IC4302
Q4314
Q4817
Q4801
Q4815
Q4329
Q4320
SUB SUFFIX
1 2 3 4 5
6 7 8 9 A
Y2
CN3002
CXD2303AQ
A/D
CXD3106Q
PLL
AN5344FBP-K
FRESH TONE
AN5395FBP
SHARPNESS
NJM3109M
CXA1315M-TBB
DAC
TA8667F-TBB
PA0030
SHARPNESS
4053
4066
4040
4066
Y3
CN3001
R-YD
B-YD
VMY
DL3001
DL4302
DL4301
CMK-M1X

SIDE A

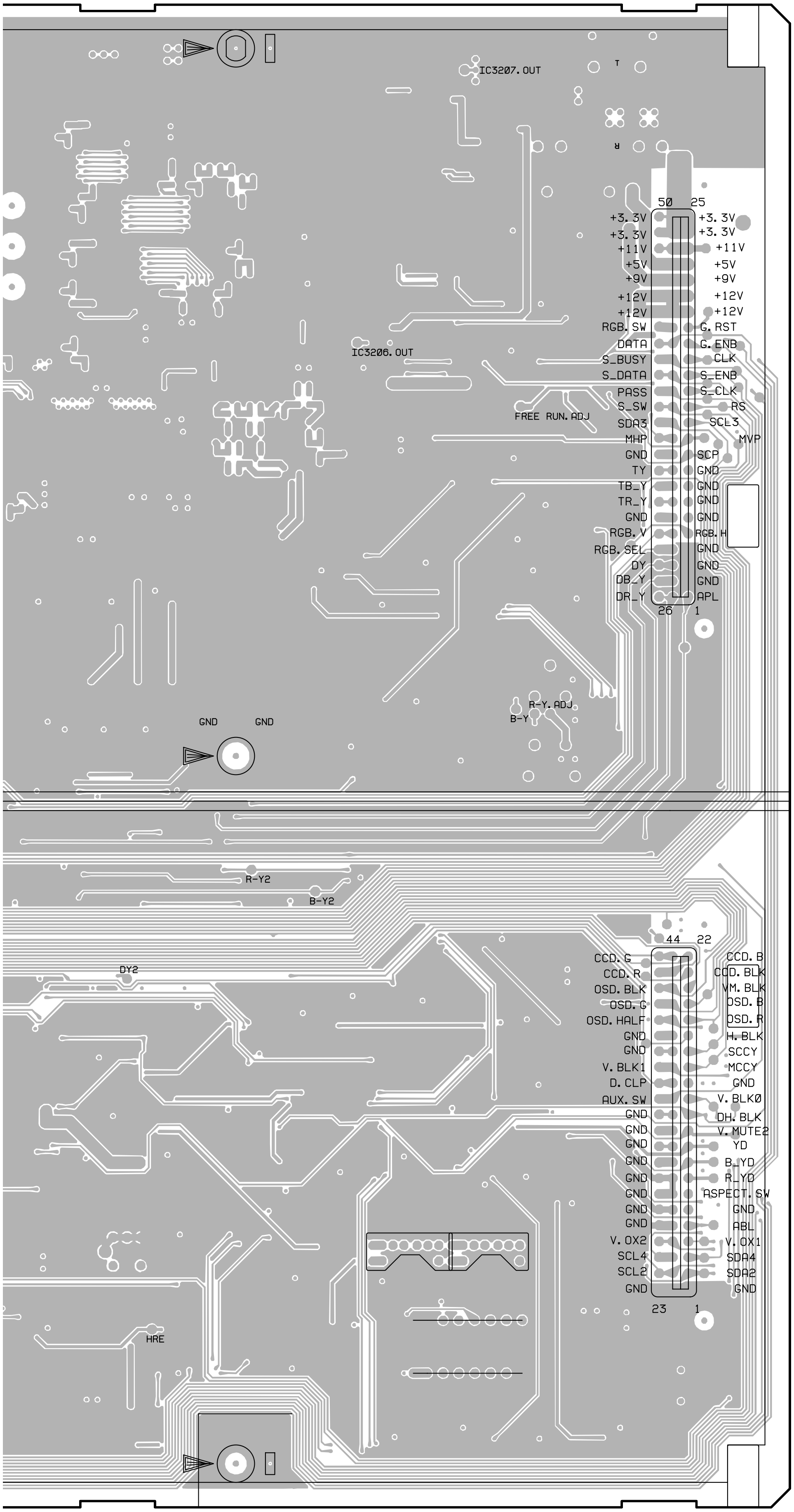

ANP1948-A
AWV1801-A
AWV1819-A
PE5067 #IC102
PE5066 #IC101
(UPD4811650GF) (HY58163210) 16M SGRAM EM636327Q
(HD64F3067) PD3420 I/P U-COM
MB40958 D/A
SYNC SEPA M52036SP
PD5563
PD5497
HG62G010R29FB
IC3507IF-TF
4538
4066
4040
74
WHITE
RED
SUB VIDEO ASSEMBLY
From FLASH2
RESET
GND
5V
IC3601
IC3401
IC3501
IC3604
To FLASH 2 I/PU-COM WRITE CONNECTOR
IC3602
IC3801
IC3802
Q3601
Q3602
Q2210
IC2203
Q2201
Q2202
Q4071
Q4070
Q4094
IC2201
L
CN305
K6
Q4093
Q4089
Q4098
Q4097
Q4085
Q4102
Q4083
Q4096
Q4086
Q4084
Q4087
IC4056
Q2203
Q2204
Q4069
IC2204
Q4073
Q4067
VR4051
IC4054
Q4074
IC2206
CN308
K2
Q4072
Q4066
IC4053
Q4812
Q4068
Q4327
Q4328
Q2207
Q2205
Q4811
Q2208
Q2206
IC2205
Q2209
Q4807
IC4802
IC4804
IC2202
I
CN1653
H6
IC4803
IC4801
Q4806
Q4804
Q4803

(ANP1948–A)

H SUB VIDEO SERVICE ASSY

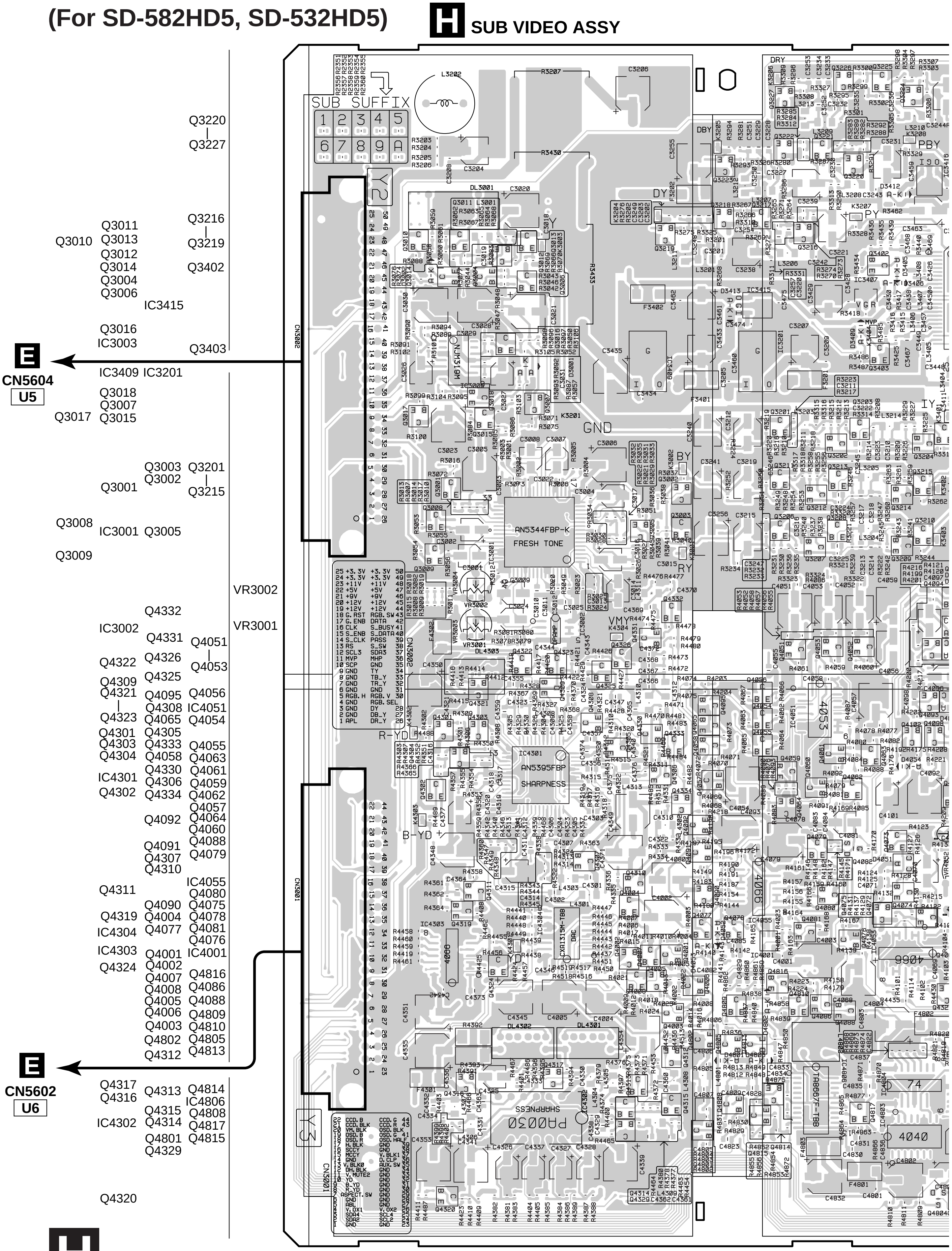

From FLASH2
I/P U-COM
WRITE CONNECTER
PD5563
Y1
GND
ABL
GND
V.BLK0
GND
DH.BLK
GND
DV
GND
DH
GND
VM.Y
GND
TO H.DEF ASSEMBLY
HIGH VOLTAGE
OPTION.1
OPTION.2
DY
Y4
GND
GND
H.OSC
.SW
H.PHA
.ADJ
H.SIZE
.ADJ
CPU.R
TO H.DEF ASSEMBLY
HIGH VOLTAGE
RESET
Y5
CV-R
CV-G
CV-B
CV-BLK
GND
V.BLK2
SCCY
TO DIGITAL CONV.ASSEMBLY
PD5497
OPTION.3

SIDE B

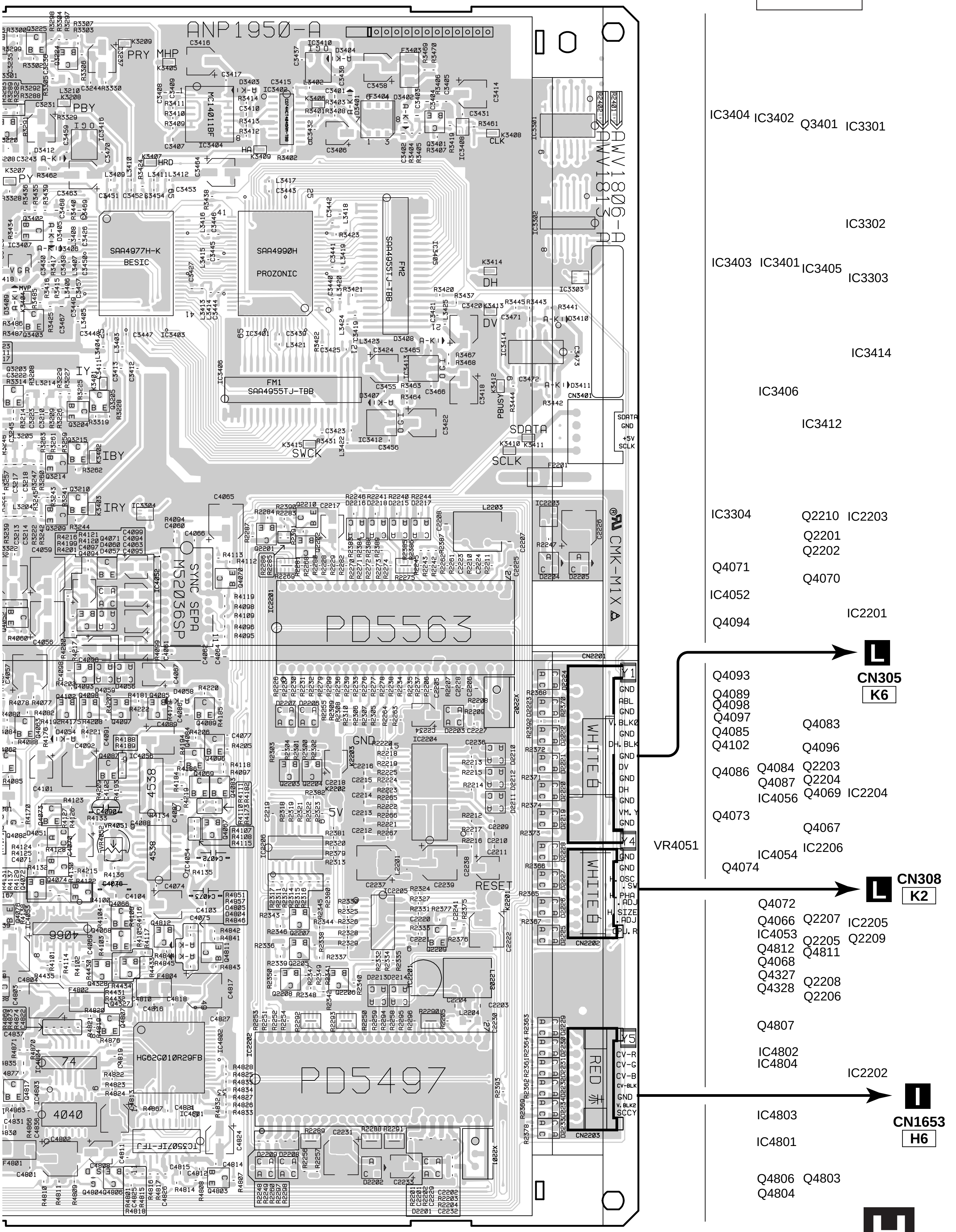

IC3207.OUT
R
IC3206.OUT
FREE RUN.ADJ
50
25
+3.3V
+3.3V
+11V
+5V
+9V
+12V
+12V
RGB.SW
DATA
S_BUSY
S_DATA
PASS
S_SW
SDA3
MHP
GND
TY
TB_Y
TR_Y
GND
RGB.V
RGB.SEL
DY
DB_Y
DR_Y
+3.3V
+3.3V
+11V
+5V
+9V
+12V
+12V
G.RST
G.ENB
CLK
S_ENB
S_CLK
RS
SCL3
MVP
SCP
GND
GND
GND
GND
RGB.H
GND
GND
GND
APL
26
1
R-Y.ADJ
B-Y
GND
GND
R-Y2
B-Y2
DY2
44
22
CCD.G
CCD.R
OSD.BLK
OSD.G
OSD.HALF
GND
GND
V.BLK1
D.CLP
AUX.SW
GND
GND
GND
GND
GND
GND
GND
GND
V.OX2
SCL4
SCL2
GND
CCD.B
CCD.BLK
VM.BLK
OSD.B
OSD.R
H.BLK
SCCY
MCCY
GND
V.BLK0
DH.BLK
V.MUTE2
YD
B_YD
R_YD
ASPECT.SW
GND
ABL
V.OX1
SDA4
SDA2
GND
23
1
HRE

(ANP1948–A)

4.5 SUB VIDEO ASSY
(For SD-582HD5, SD-532HD5)

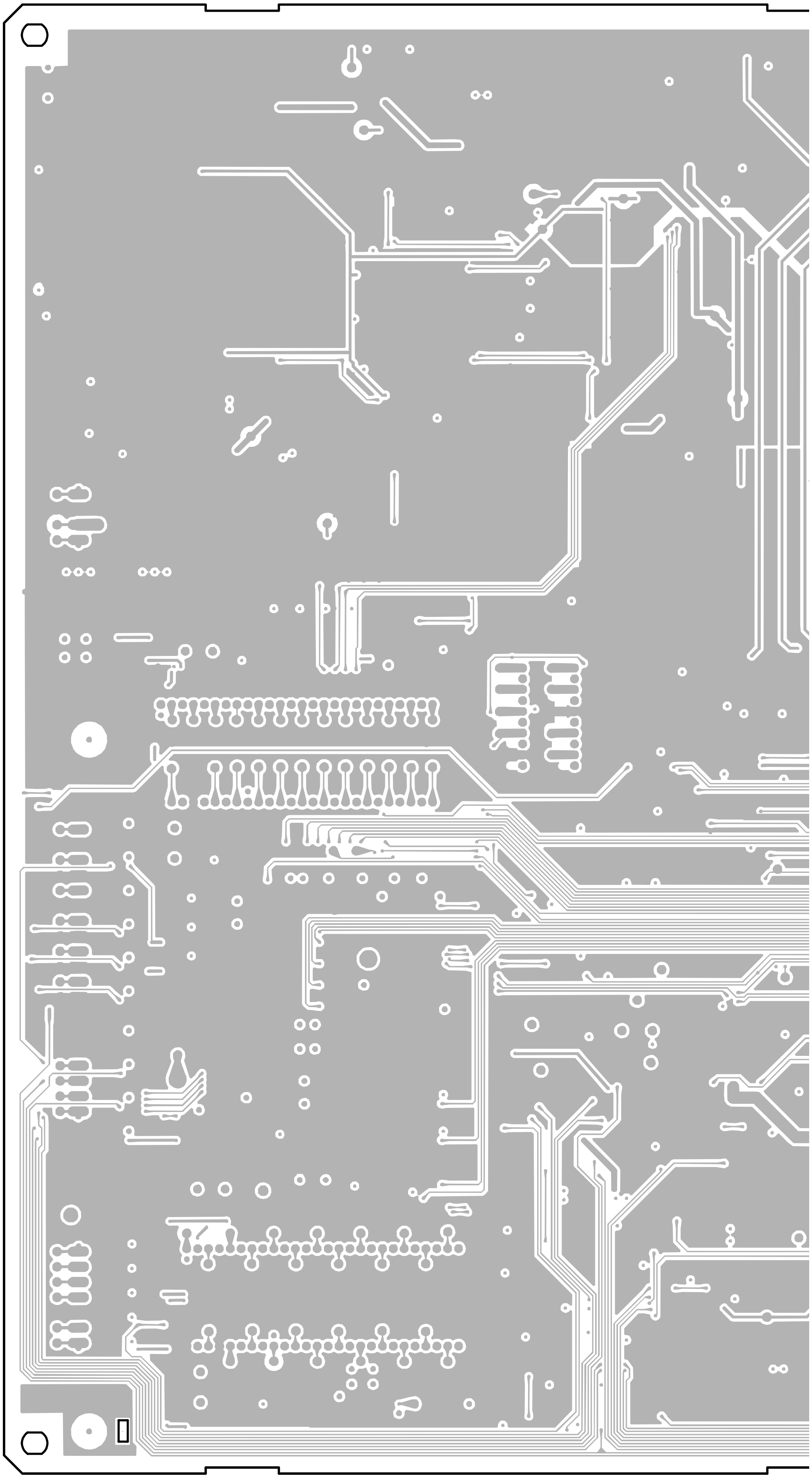

H SUB VIDEO ASSY
Q3220 | Q3227
Q3216 | Q3219
Q3402
Q3011 Q3013 Q3012 Q3014 Q3004 Q3006
Q3010
IC3415
Q3016 IC3003
Q3403
E
CN5604
U5
IC3409 IC3201
Q3018 Q3007 Q3015
Q3017
Q3003 Q3002
Q3001
Q3201 | Q3215
Q3008
IC3001 Q3005
Q3009
VR3002
VR3001
Q4332
IC3002
Q4331
Q4051 | Q4053
Q4322 Q4326 Q4325
Q4309 Q4321 | Q4323
Q4095 Q4308 Q4065 Q4305 Q4333 Q4058 Q4330 Q4306 Q4334
Q4056 IC4051 Q4054
Q4301 Q4303 Q4304
Q4055 Q4063 Q4061 Q4059 Q4062 Q4057 Q4064 Q4060 Q4088 Q4079
IC4301 Q4302
Q4092
Q4091 Q4307 Q4310
Q4311
IC4055 Q4080 Q4075 Q4078 Q4081 Q4076 IC4001
Q4090 Q4004 Q4077
Q4319 IC4304 IC4303 Q4324
Q4001 Q4002 Q4007 Q4008 Q4005 Q4006 Q4003 Q4802 Q4312
Q4816 Q4086 Q4088 Q4809 Q4810 Q4805 Q4813
E
CN5602
U6
Q4317 Q4316
Q4313 Q4315 Q4314 Q4801 Q4329
Q4814 IC4806 Q4808 Q4817 Q4815
IC4302
Q4320
SUB SUFFIX
1 2 3 4 5
6 7 8 9 A
L3202
Y2
Y3
CN3002
CN3001
AN5344FBP-K
FRESH TONE
NJM3519M
AN5395FBP
SHARPNESS
CXD1315M-TBB
DAC
PA0030
SHARPNESS
TA8667F-TBB
4053
4066
4066
4060
4040
74
DRY
DBY
DY
PBY
IY
BY
RY
VMY
GND
R-YD
B-YD
25 +3.3V +3.3V 50
24 +3.3V +3.3V 49
23 +11V +11V 48
22 +5V +5V 47
21 +9V +9V 46
20 +12V +12V 45
19 +12V +12V 44
18 G.RST RGB.SW 43
17 G.ENB DATA 42
16 CLK S_BUSY 41
15 S_ENB S_DATA 40
14 S_CLK PASS 39
13 RS S_SW 38
12 SCL3 SDA3 37
11 MVP MHP 36
10 SCP GND 35
9 GND TY 34
8 GND TB_Y 33
7 GND TR_Y 32
6 GND GND 31
5 RGB.H RGB.V 30
4 GND RGB.SEL 29
3 GND DY 28
2 GND DB_Y 27
1 APL DR_Y 26

SIDE A

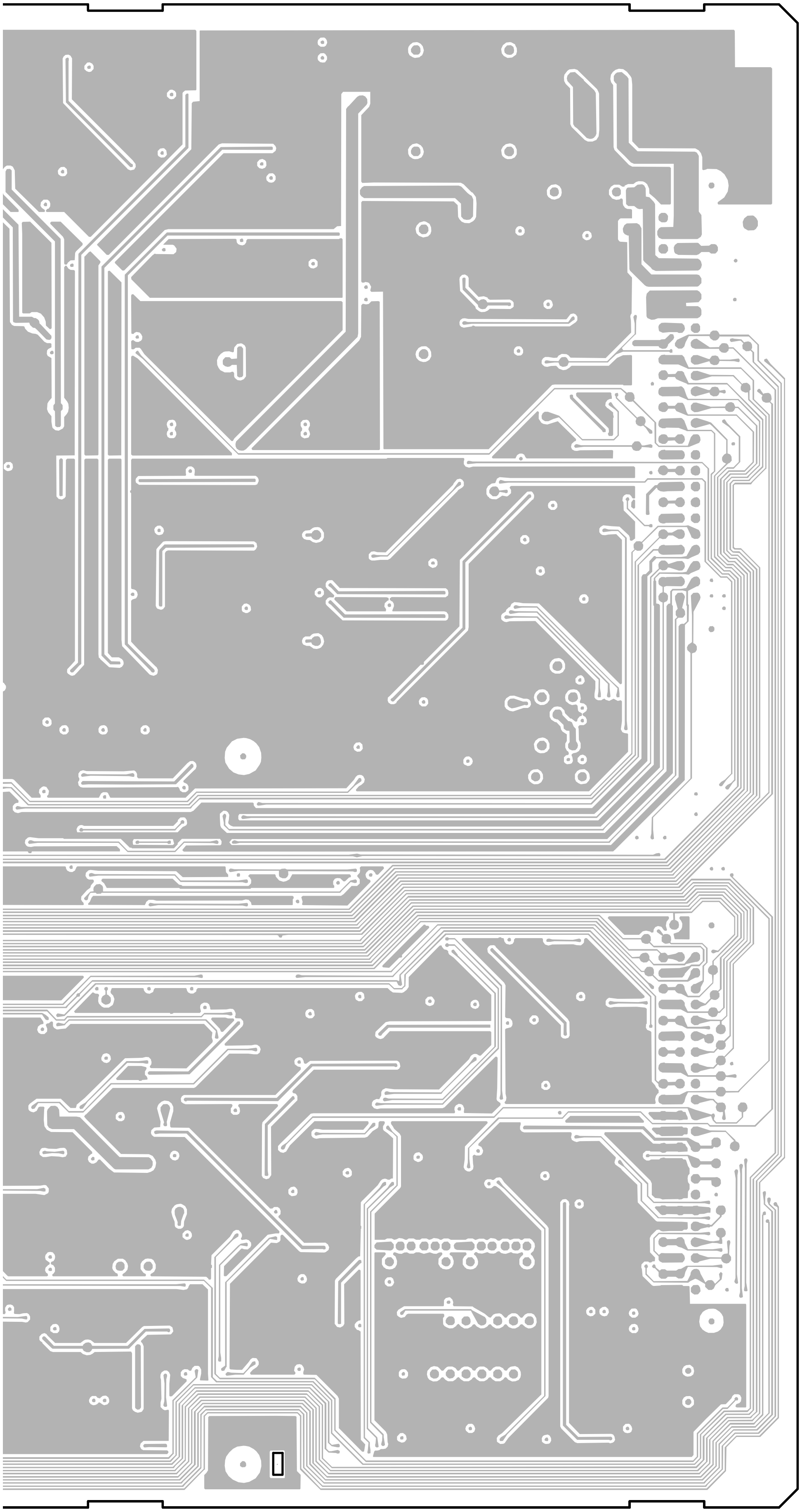

ANP1950-A
AWV1806-A
AWV1813-A
SAA4977H-K BESIC
SAA4990H PROZONIC
SAA4955TJ-TBB FM2
FM1 SAA4955TJ-TBB
MC14011BF
M52036SP SYNC SEPA
PD5563
PD5497
HG62G010R29FB
4538
4066
4040
74
TC35071F-TFJ
CMK-M1X
WHITE 6
RED 7
IC3404
IC3402
Q3401
IC3301
IC3302
IC3403
IC3401
IC3405
IC3303
IC3414
IC3406
IC3412
IC3304
Q2210
IC2203
Q2201
Q2202
Q4071
Q4070
IC4052
IC2201
Q4094
Q4093
Q4089
Q4098
Q4097
Q4085
Q4102
Q4083
Q4096
Q4086
Q4084
Q4087
IC4056
Q2203
Q2204
Q4069
IC2204
Q4073
Q4067
VR4051
IC4054
IC2206
Q4074
Q4072
Q4066
IC4053
Q2207
IC2205
Q2205
Q2209
Q4812
Q4811
Q4068
Q4327
Q4328
Q2208
Q2206
Q4807
IC4802
IC4804
IC2202
IC4803
IC4801
Q4806
Q4803
Q4804
L
CN305
K6
L
CN308
K2
I
CN1653
H6
A
B
C
D

(ANP1950–A)

H SUB VIDEO ASSY



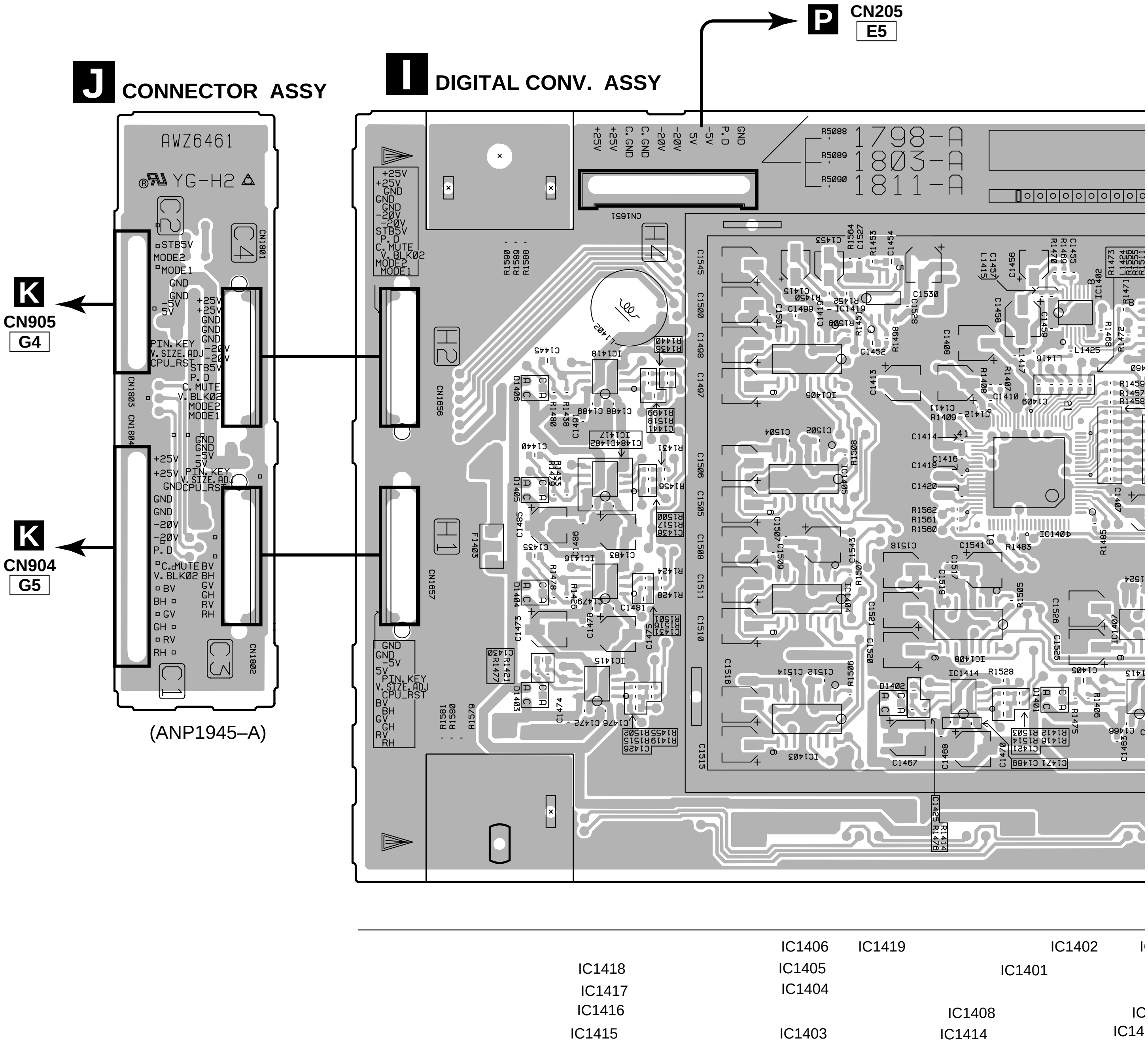
SIDE B



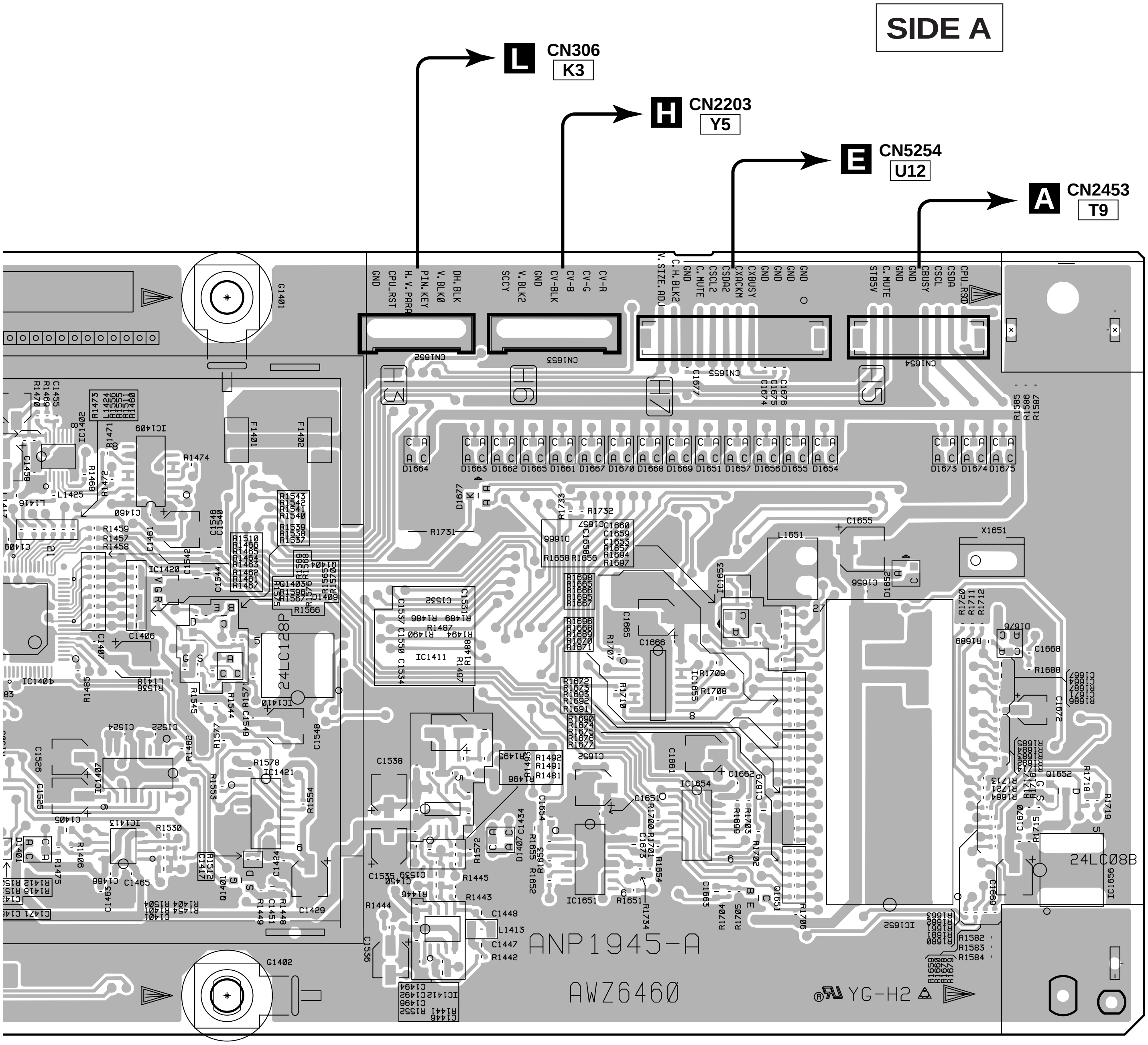
(ANP1950–A)

4.6 DIGITAL CONV. ASSY and CONNECTOR ASSY

SIDE A


P
CN205
E5
J
CONNECTOR ASSY
I
DIGITAL CONV. ASSY
AWZ6461
YG-H2
K
CN905
G4
K
CN904
G5
CN1801
CN1802
CN1803
CN1804
CN1651
CN1656
CN1657
+25V
+25V
GND
GND
-20V
-20V
STB5V
P.D
C.MUTE
V.BLK02
MODE2
MODE1
-5V
5V
PIN.KEY
V.SIZE.ADJ
CPU_RST
BV
BH
GV
GH
RV
RH
1798-A
1803-A
1811-A
R5088
R5089
R5090
H1
H2
H4
C1
C2
C3
C4
IC1406
IC1419
IC1402
IC1418
IC1405
IC1401
IC1417
IC1404
IC1416
IC1408
IC1415
IC1403
IC1414

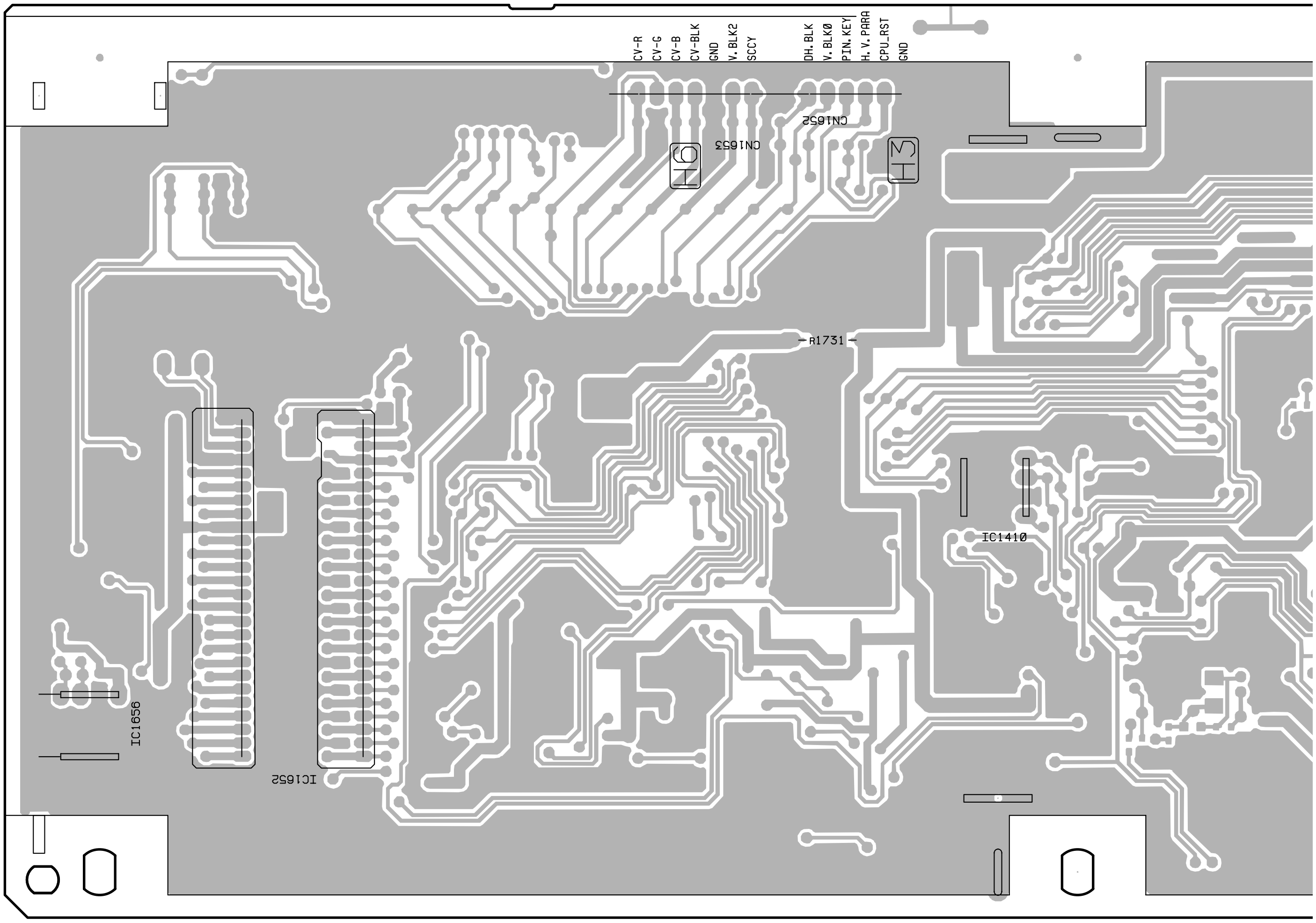
(ANP1945–A)


SIDE A
L CN306 K3
H CN2203 Y5
E CN5254 U12
A CN2453 T9
GND
CPU.RST
H.V.PARA
PIN.KEY
V.BLK0
DH.BLK
SCCY
V.BLK2
GND
CV-BLK
CV-B
CV-G
CV-R
V.SIZE.ADJ
C.H.BLK2
GND
C.MUTE
CSCL2
CSDA2
CXACKM
CXBUSY
GND
GND
GND
GND
STBSV
C.MUTE
GND
GND
CBUSY
CSCL
CSDA
CPU.RST
CN1652
CN1653
CN1655
CN1654
H3
H6
H7
H5
24LC128P
24LC08B
ANP1945-A
AWZ6460
YG-H2
IC1651
IC1652
IC1411
IC1654
IC1655
IC1653
IC1656
Q1652
X1651
L1651
G1401
G1402

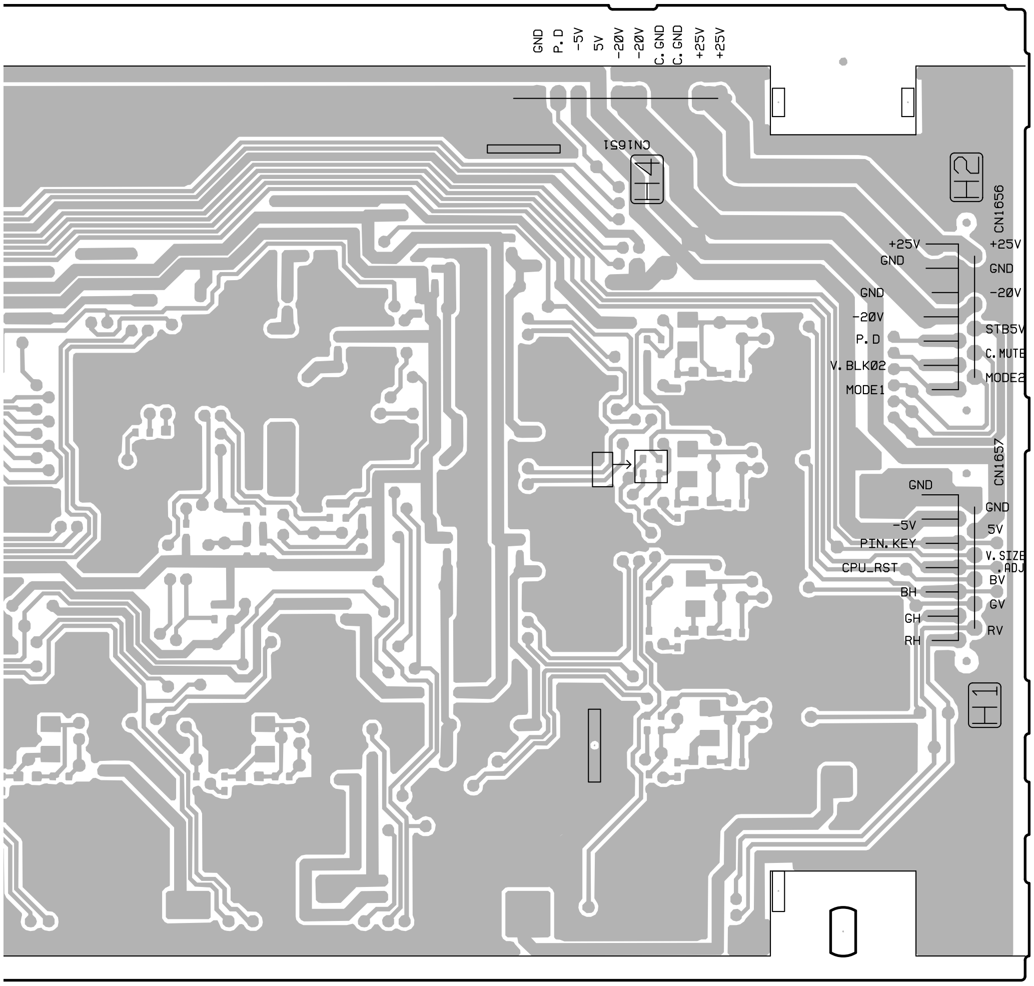
(ANP1945–A)

IC1402 IC1409
401 IC1420 Q1404 IC1653
Q1403 IC1410 IC1655 IC1652
IC1407 Q1652
IC1413 IC1421 IC1411 IC1651 IC1654 IC1656
Q1401 IC1412 Q1651

I DIGITAL CONV. ASSY

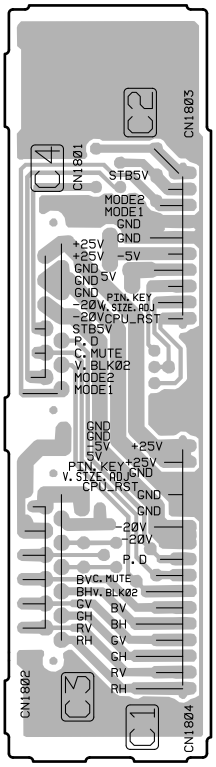

CV-R
CV-G
CV-B
CV-BLK
GND
V.BLK2
SCCY
DH.BLK
V.BLK0
PIN.KEY
H.V.PARA
CPU_RST
GND
CN1652
CN1653
R1731
IC1410
IC1656
IC1652

SIDE B


GND
P.D
-5V
5V
-20V
-20V
C.GND
C.GND
+25V
+25V
CN1651
H4
H2
CN1656
+25V
GND
GND
-20V
P.D
V.BLK02
MODE1
+25V
GND
-20V
STB5V
C.MUTE
MODE2
CN1657
GND
-5V
PIN.KEY
CPU_RST
BH
GH
RH
GND
5V
V.SIZE.ADJ
BV
GV
RV
H1

(ANP1945–A)

J CONNECTOR ASSY

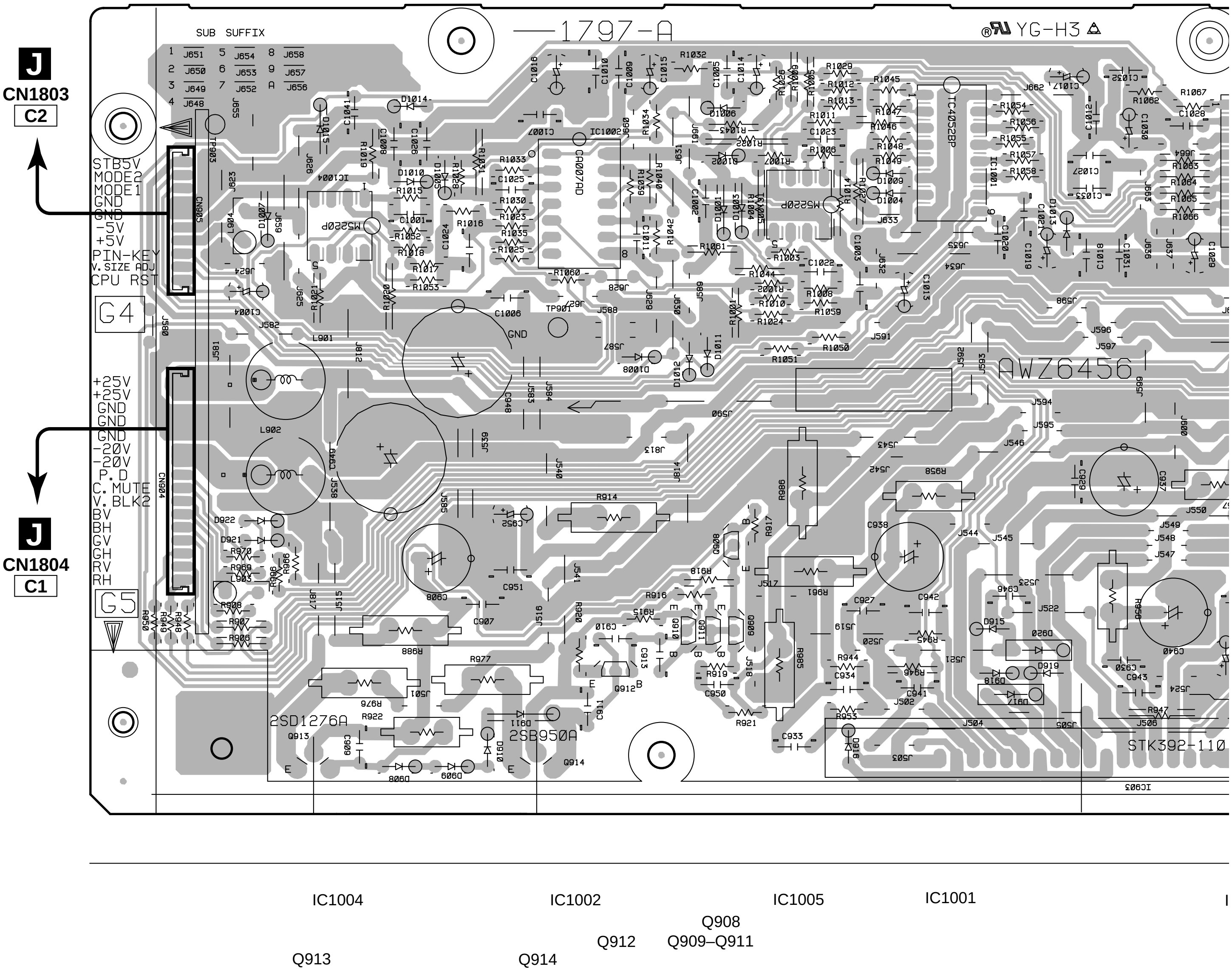

C2
CN1803
C4
CN1801
STB5V
MODE2
MODE1
GND
GND
-5V
5V
PIN.KEY
V.SIZE.ADJ
CPU_RST
+25V
+25V
GND
GND
GND
-20V
-20V
STB5V
P.D
C.MUTE
V.BLK02
MODE2
MODE1
GND
GND
-5V
5V
PIN.KEY
V.SIZE.ADJ
CPU_RST
+25V
+25V
GND
GND
GND
-20V
-20V
P.D
C.MUTE
V.BLK02
BV
BH
GV
GH
RV
RH
BV
BH
GV
GH
RV
RH
CN1802
C3
C1
CN1804

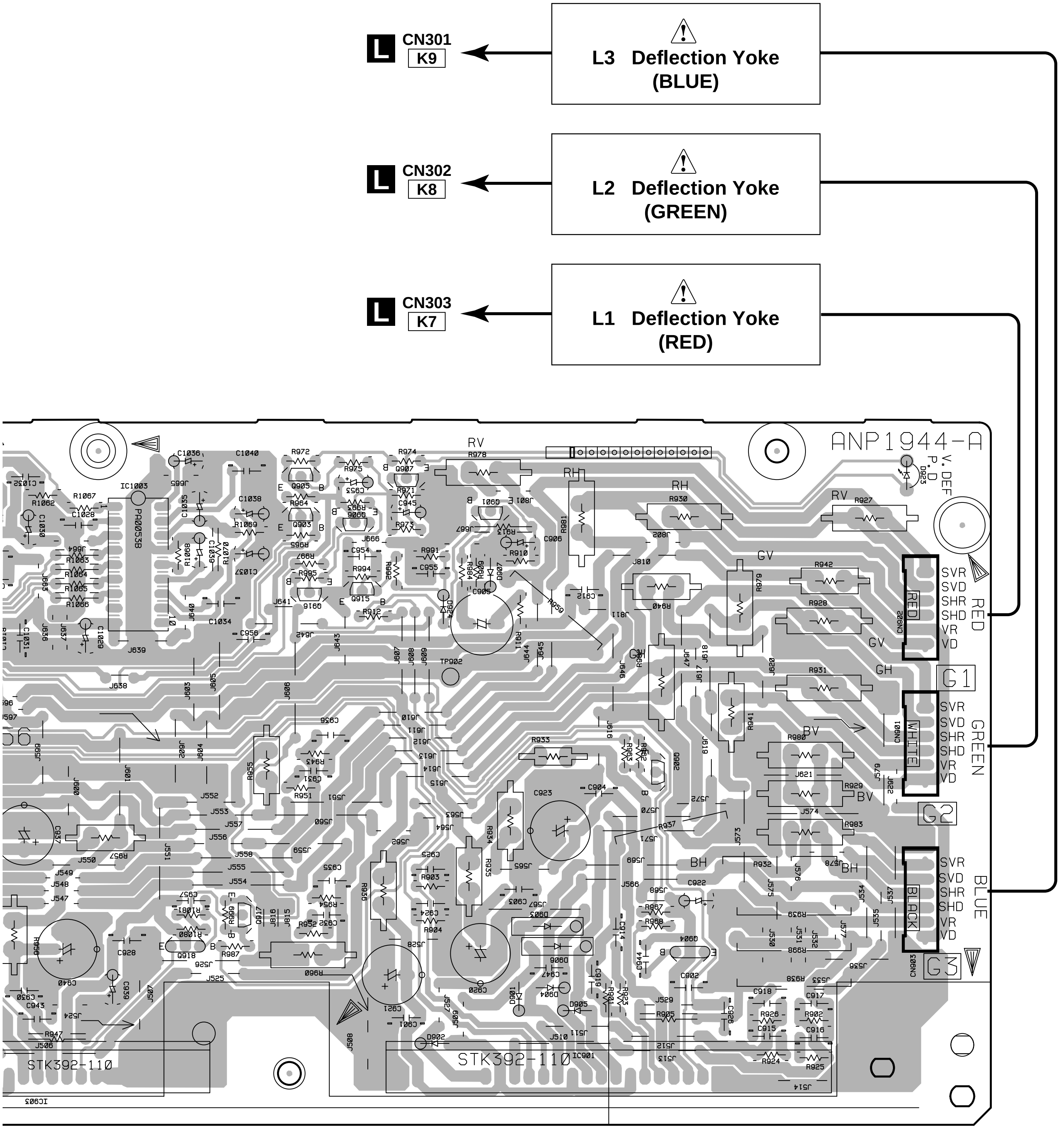
(ANP1945–A)

4.7 CONV. AMP ASSY

SIDE A

K **CONV. AMP ASSY**


J
CN1803
C2
J
CN1804
C1
1797-A
YG-H3
SUB SUFFIX
1 J651
2 J650
3 J649
4 J648
5 J654
6 J653
7 J652
8 J658
9 J657
A J656
STB5V
MODE2
MODE1
GND
GND
-5V
+5V
PIN-KEY
V.SIZE ADJ
CPU RST
CN905
G4
+25V
+25V
GND
GND
GND
-20V
-20V
P.D
C.MUTE
V.BLK2
BV
BH
GV
GH
RV
RH
CN904
G5
IC1004
M5220P
IC1002
CA0007AD
IC1005
M5220P
TC4052BP
IC1001
AWZ6456
L901
L902
GND
TP901
TP903
2SD1276A
Q913
2SB950A
Q914
Q912
Q908
Q909
Q910
Q911
STK392-110
IC903
IC1004
IC1002
IC1005
IC1001
Q908
Q912
Q909–Q911
Q913
Q914



L CN301 K9
L3 Deflection Yoke (BLUE)
L CN302 K8
L2 Deflection Yoke (GREEN)
L CN303 K7
L1 Deflection Yoke (RED)
ANP1944-A
V. DEF
P.D
D923
RV
RH
GV
GH
BV
BH
CN902 RED
SVR
SVD
SHR
SHD
VR
VD
RED
G1
CN901 WHITE
GREEN
G2
CN903 BLACK
BLUE
G3
IC1003
PA0053B
STK392-110
IC901
IC903
TP902

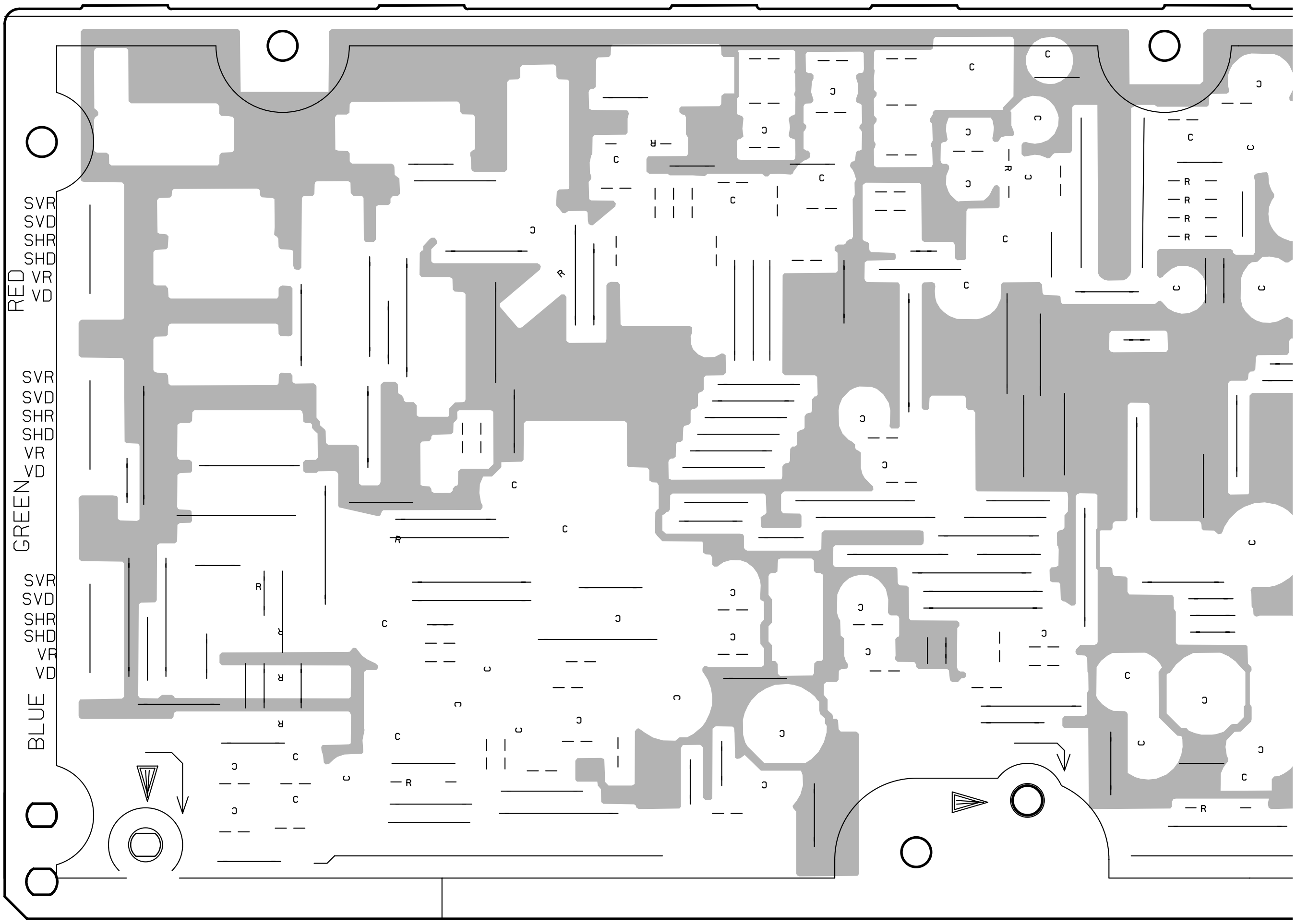
(ANP1944–A)

Q903 Q905 Q906 Q907 Q901
IC1003 Q916 Q915
Q902
Q918 Q917
Q904

A

K CONV. AMP ASSY

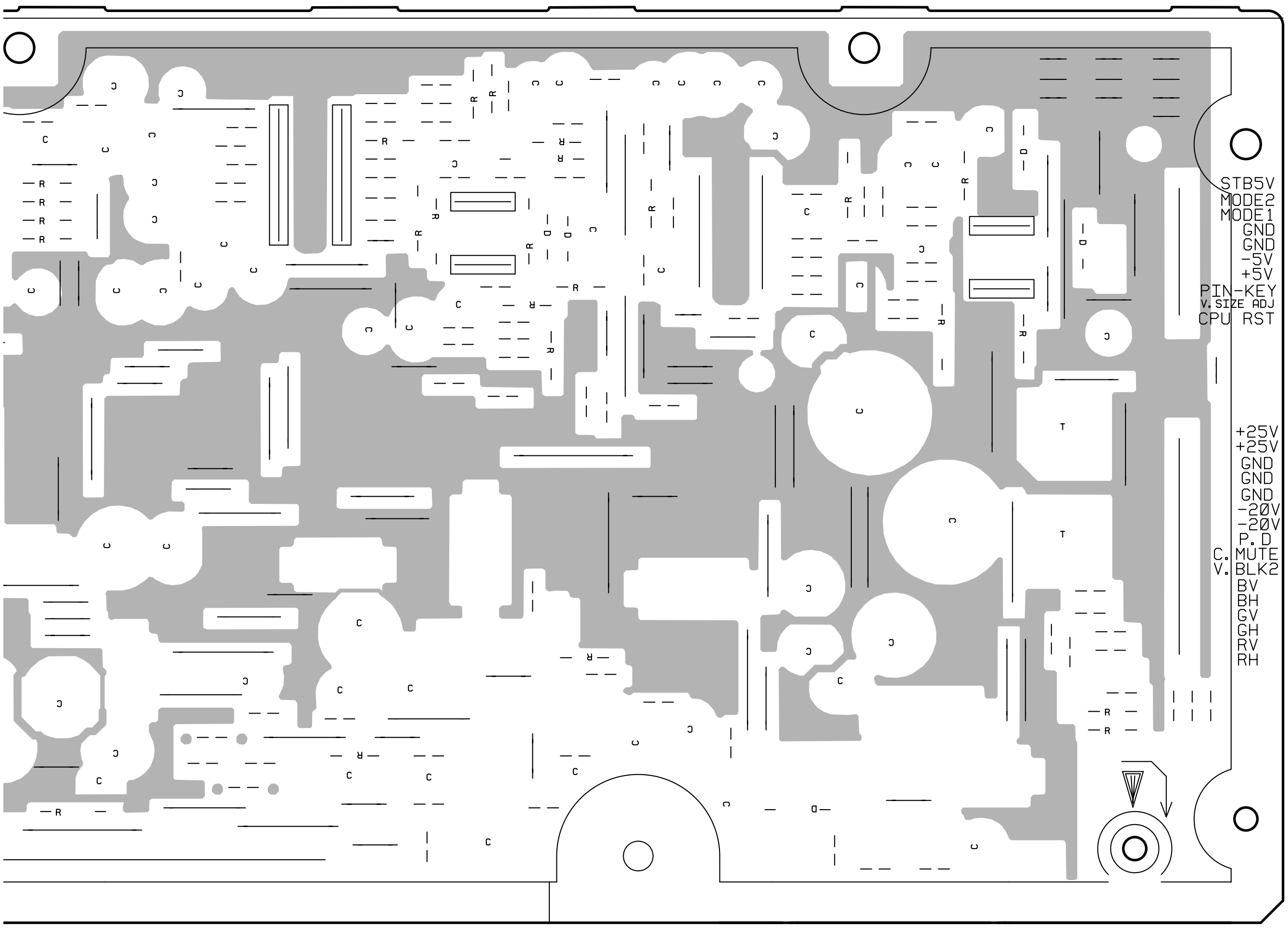
B


SVR
SVD
SHR
SHD
VR
VD
RED
SVR
SVD
SHR
SHD
VR
VD
GREEN
SVR
SVD
SHR
SHD
VR
VD
BLUE
C
R

C

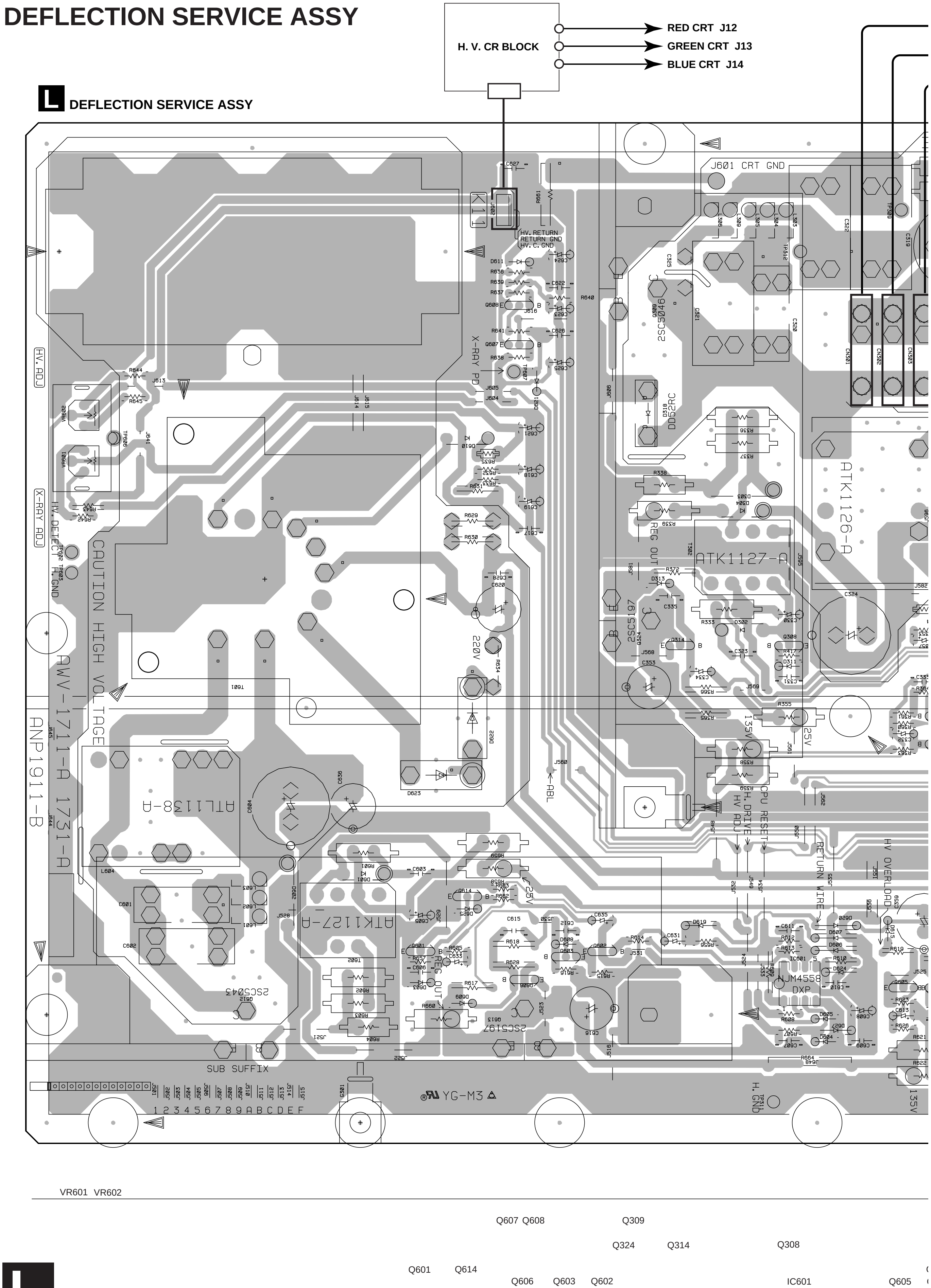
D

SIDE B


STB5V
MODE2
MODE1
GND
GND
-5V
+5V
PIN-KEY
V.SIZE ADJ
CPU RST
+25V
+25V
GND
GND
GND
-20V
-20V
P.D
C.MUTE
V.BLK2
BV
BH
GV
GH
RV
RH
C
R
D
T

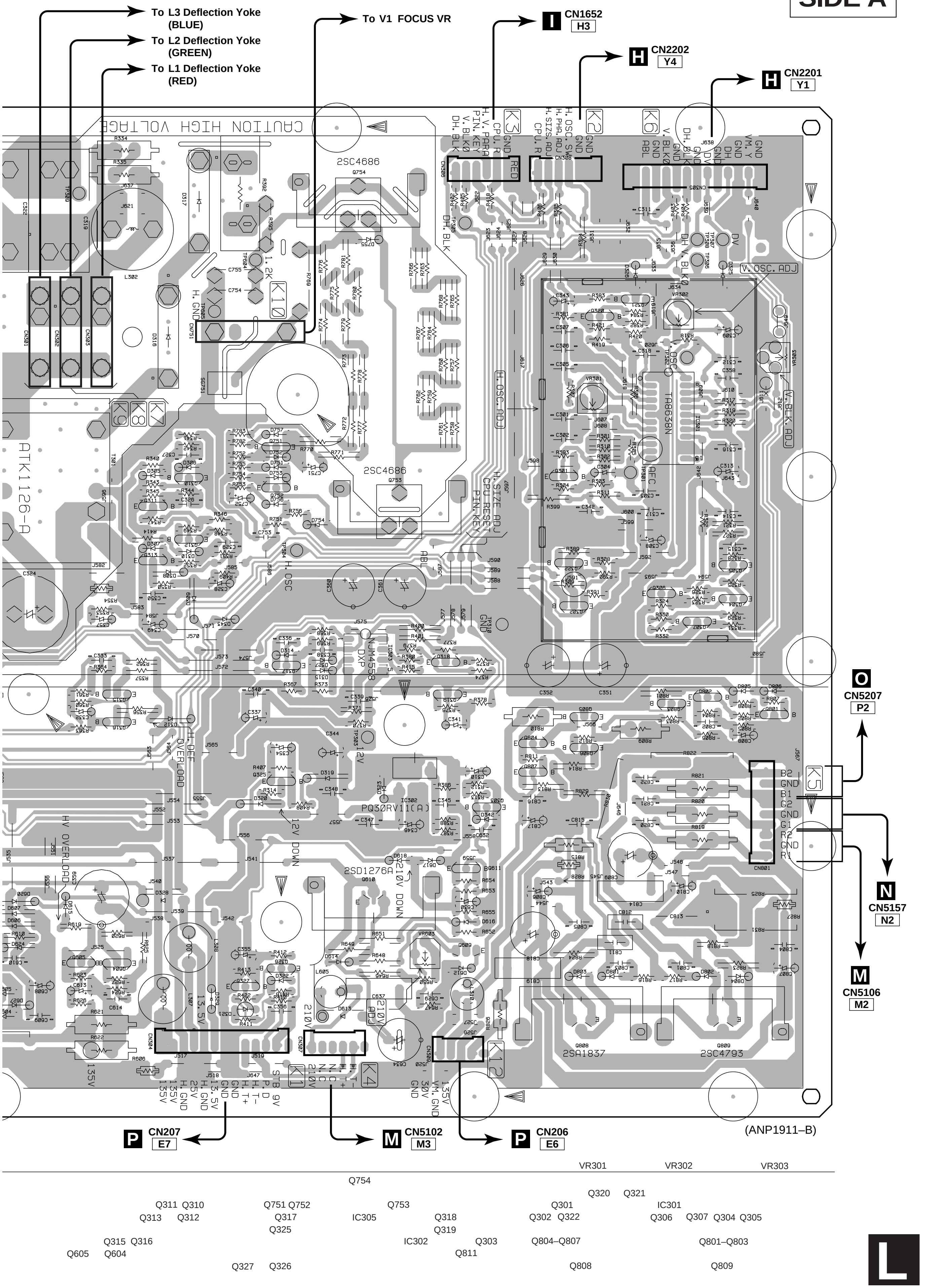
(ANP1944–A)

4.8 DEFLECTION SERVICE ASSY


H. V. CR BLOCK
RED CRT J12
GREEN CRT J13
BLUE CRT J14
L DEFLECTION SERVICE ASSY
J601 CRT GND
HV. RETURN
RETURN GND
HV. C. GND
X-RAY PD
HV. ADJ
X-RAY ADJ
H.V. DETECT
H.GND
CAUTION HIGH VOLTAGE
AWV-1711-A 1731-A
ANP1911-B
ATL1138-A
ATK1127-A
ATK1126-A
2SC5046
2SC5197
2SC5043
DD52RC
REG OUT
220V
ABL
25V
135V
CPU RESET
H.DRIVE
HV ADJ
RETURN WIRE
HV OVERLOAD
NJM4558
DXP
SUB SUFFIX
1 2 3 4 5 6 7 8 9 A B C D E F
YG-M3
H. GND
VR601 VR602
Q607 Q608
Q309
Q324
Q314
Q308
Q601 Q614
Q606 Q603 Q602
Q613
Q612
IC601
Q605

L-b

SIDE A


To L3 Deflection Yoke (BLUE)
To L2 Deflection Yoke (GREEN)
To L1 Deflection Yoke (RED)
To V1 FOCUS VR
I CN1652 H3
H CN2202 Y4
H CN2201 Y1
O CN5207 P2
N CN5157 N2
M CN5106 M2
P CN207 E7
M CN5102 M3
P CN206 E6
(ANP1911–B)
CAUTION HIGH VOLTAGE
ATK1126-A
2SC4686
2SC4686
TA8638N
NJM4558DXP
PQ30RV11(A)
2SD1276A
2SA1837
2SC4793
H.OSC.ADJ
V.OSC.ADJ
V.BLK.ADJ
H.SIZE ADJ
CPU RESET
PIN.KEY
DH.BLK
H.GND
H.OSC
ABL
12V
12V DOWN
210V DOWN
210V ADJ
HV OVERLOAD
H.DEF OVERLOAD
13.5V
135V
K1 K3 K4 K5 K6 K7 K8 K9 K10 K12 K2
B2 GND B1 G2 GND G1 R2 GND R1
STB 9V P.D H.T– H.T+ GND H.GND 13.5V 25V H.GND 135V 135V
210V N.C N.C H.T– H.T+
GND 30V VM.GND 135V
VR301 VR302 VR303
Q754
Q320 Q321
Q311 Q310 Q751 Q752 Q753 Q301 IC301
Q313 Q312 Q317 IC305 Q318 Q302 Q322 Q306 Q307 Q304 Q305
Q325 Q319
Q315 Q316 IC302 Q303 Q804–Q807 Q801–Q803
Q605 Q604 Q811
Q327 Q326 Q808 Q809

A

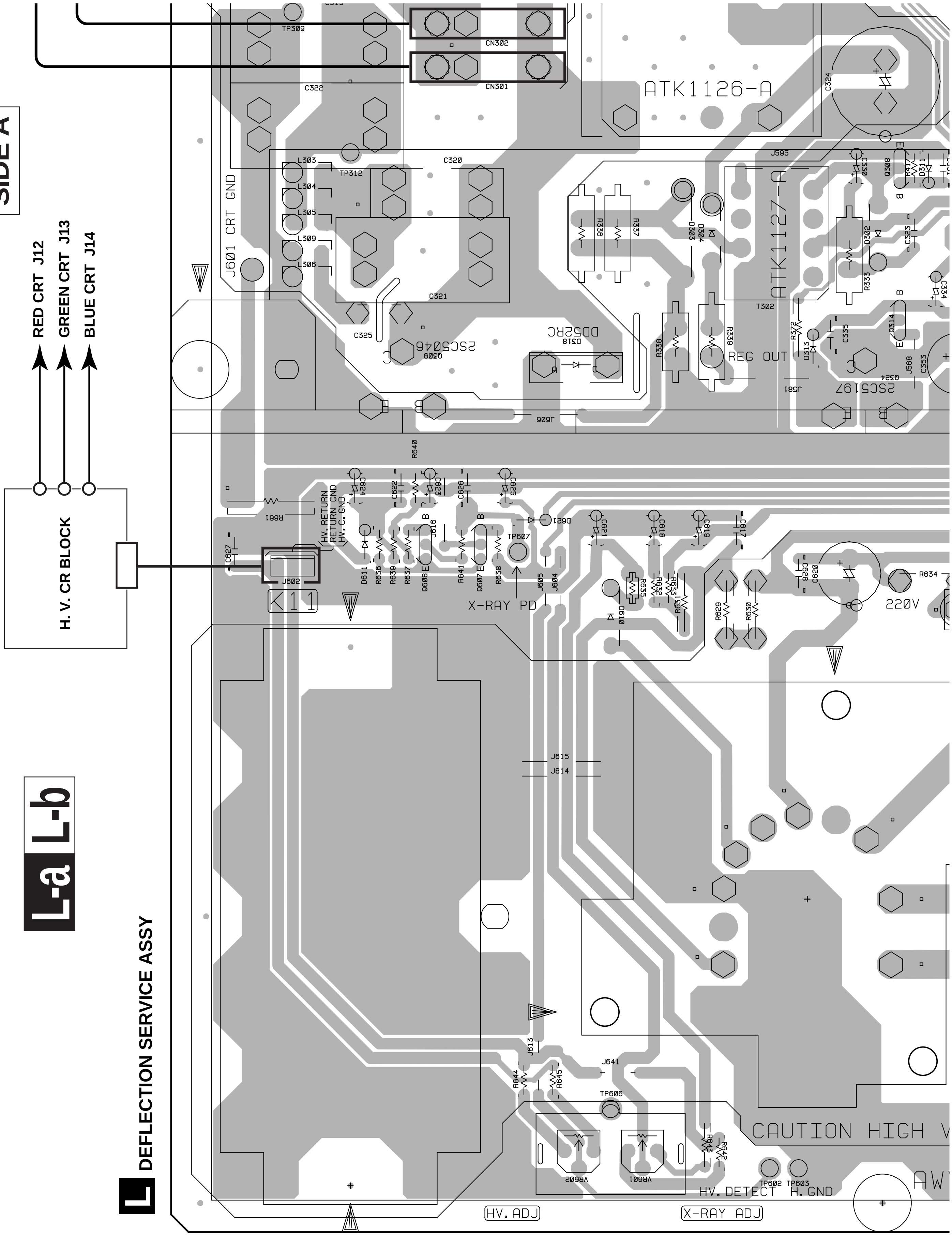
B

C

D

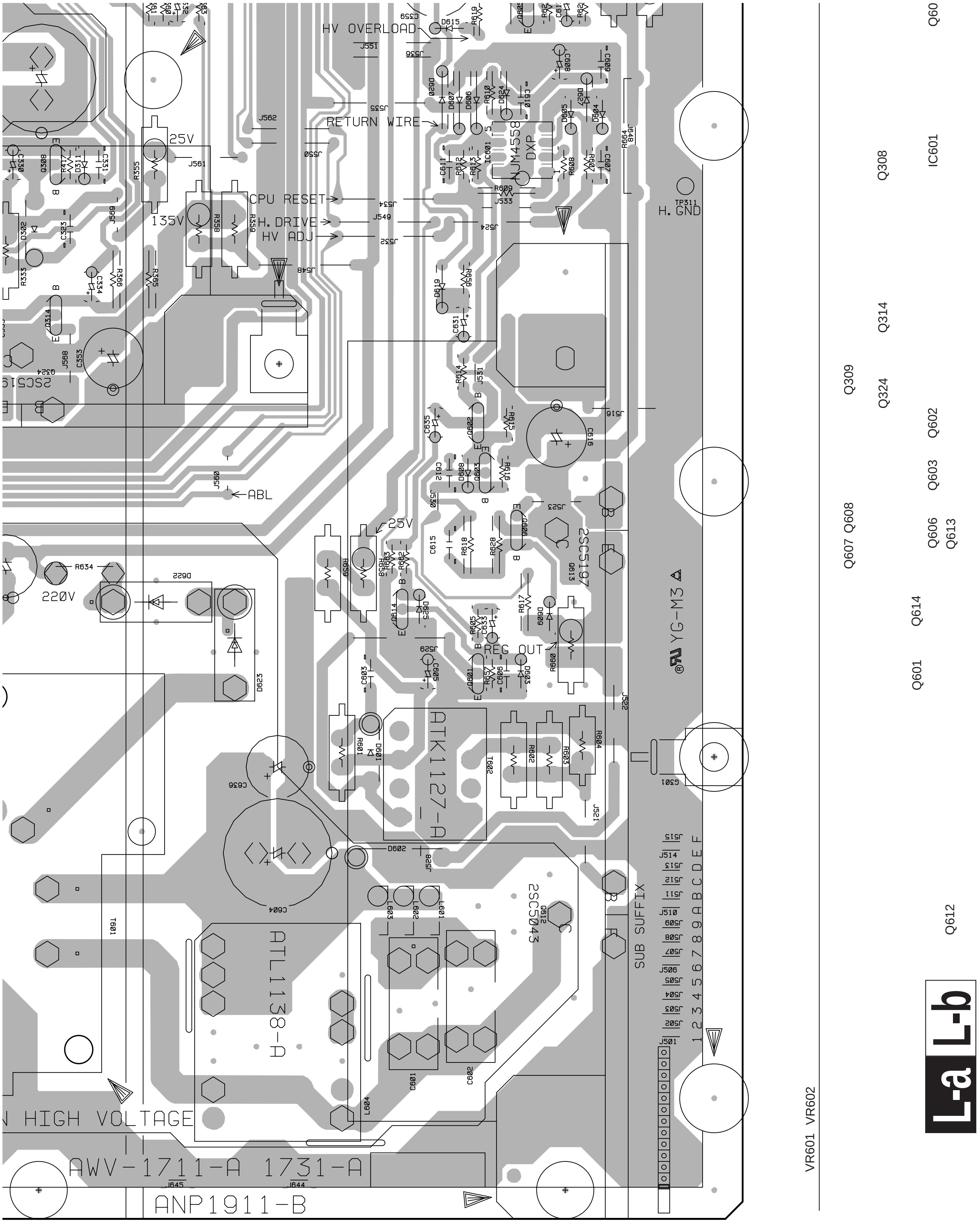
PRO-610HD, PRO-510HD, SD-582HD5, SD-532HD5

SIDE A


RED CRT J12
GREEN CRT J13
BLUE CRT J14
H. V. CR BLOCK
TP309
CN302
CN301
C322
ATK1126-A
C324
L303
L304
L305
L309
L306
TP312
C320
C321
C325
J601 CRT GND
2SC5046
Q309
DD52RC
D318
R336
R337
D305
D304
J595
ATK1127-A
T302
R338
R339
REG OUT
J581
2SC5197
Q324
R372
D313
C335
D314
J568
C353
C323
D302
R333
C334
C330
Q308
R417
D311
J606
R640
C624
C622
C623
C626
C625
R661
HV. RETURN
RETURN GND
HV. C. GND
C627
J602
K11
D611
R636
R639
R637
Q608
J616
R641
Q607
R638
TP607
D621
J605
J604
X-RAY PD
C621
C618
C619
C617
D610
R635
R632
R633
R631
R629
R630
C628
C620
R634
220V
J615
J614
J613
J641
R644
R645
TP606
R643
R642
VR602
VR601
TP602
TP603
HV. DETECT
H. GND
HV. ADJ
X-RAY ADJ
CAUTION HIGH V
AW

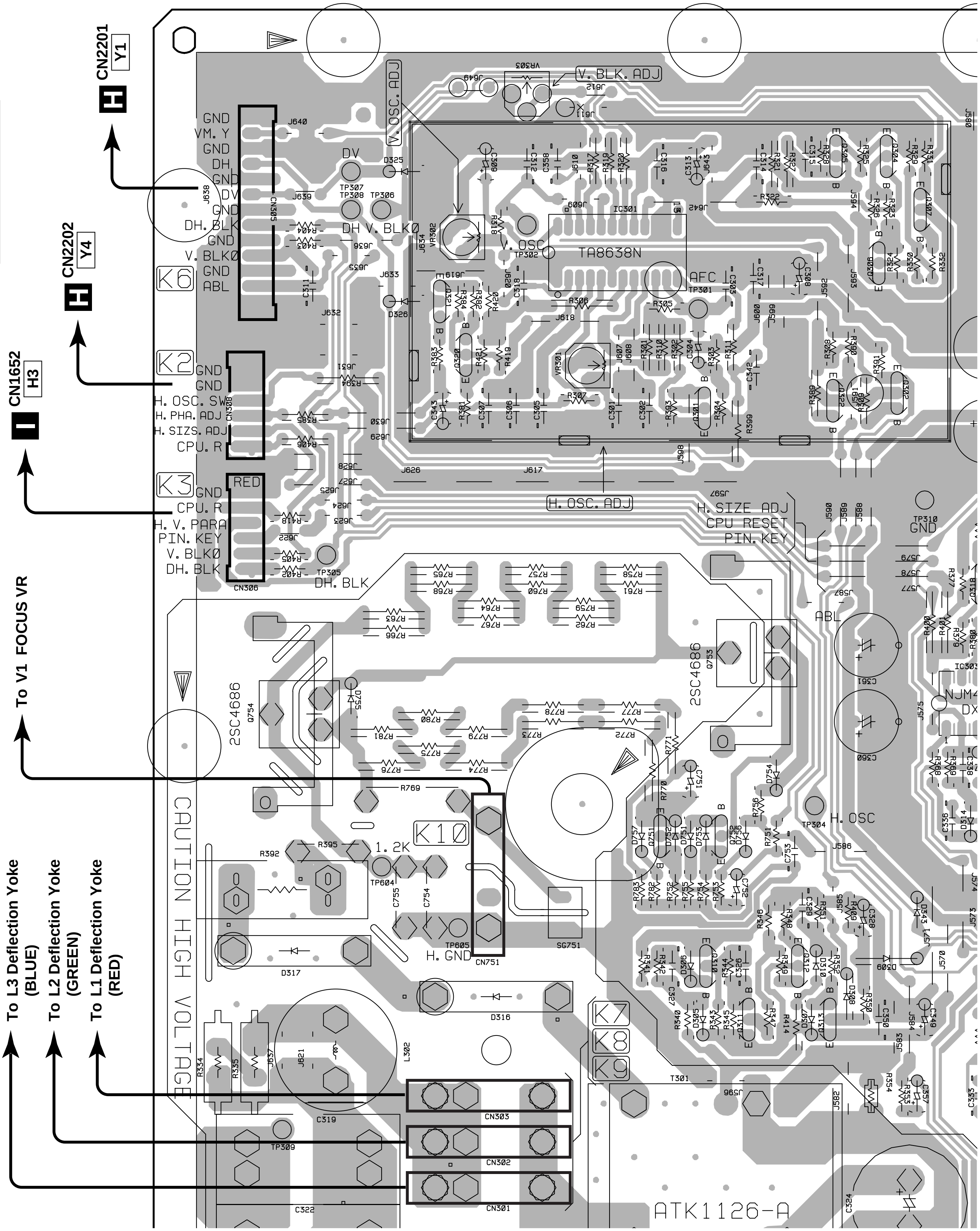
L-a L-b

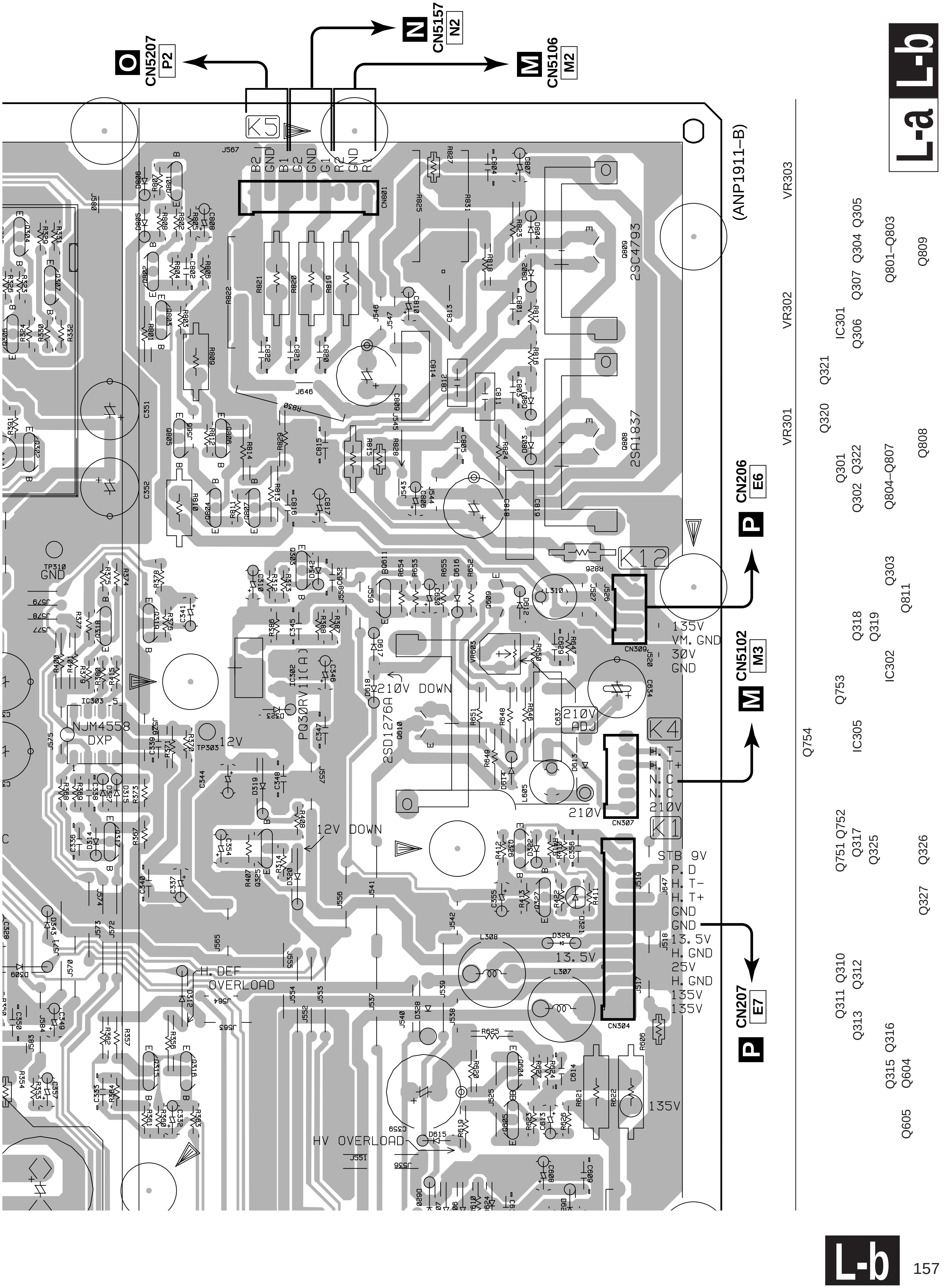
L DEFLECTION SERVICE ASSY


HV OVERLOAD
RETURN WIRE
CPU RESET
H.DRIVE
HV ADJ
25V
135V
ABL
220V
REG OUT
NJM4558DXP
IC601
TP311
H.GND
2SC5197
2SC5043
ATK1127-A
ATL1138-A
HIGH VOLTAGE
SUB SUFFIX
1 2 3 4 5 6 7 8 9 A B C D E F
YG-M3
AWV-1711-A 1731-A
ANP1911-B
C604
C636
T601
T602
D622
D623
D602
C601
C602
L604
G301
Q60
IC601
Q308
Q314
Q309
Q324
Q602
Q603
Q608
Q607
Q606
Q613
Q614
Q601
Q612
VR601 VR602
L-a L-b

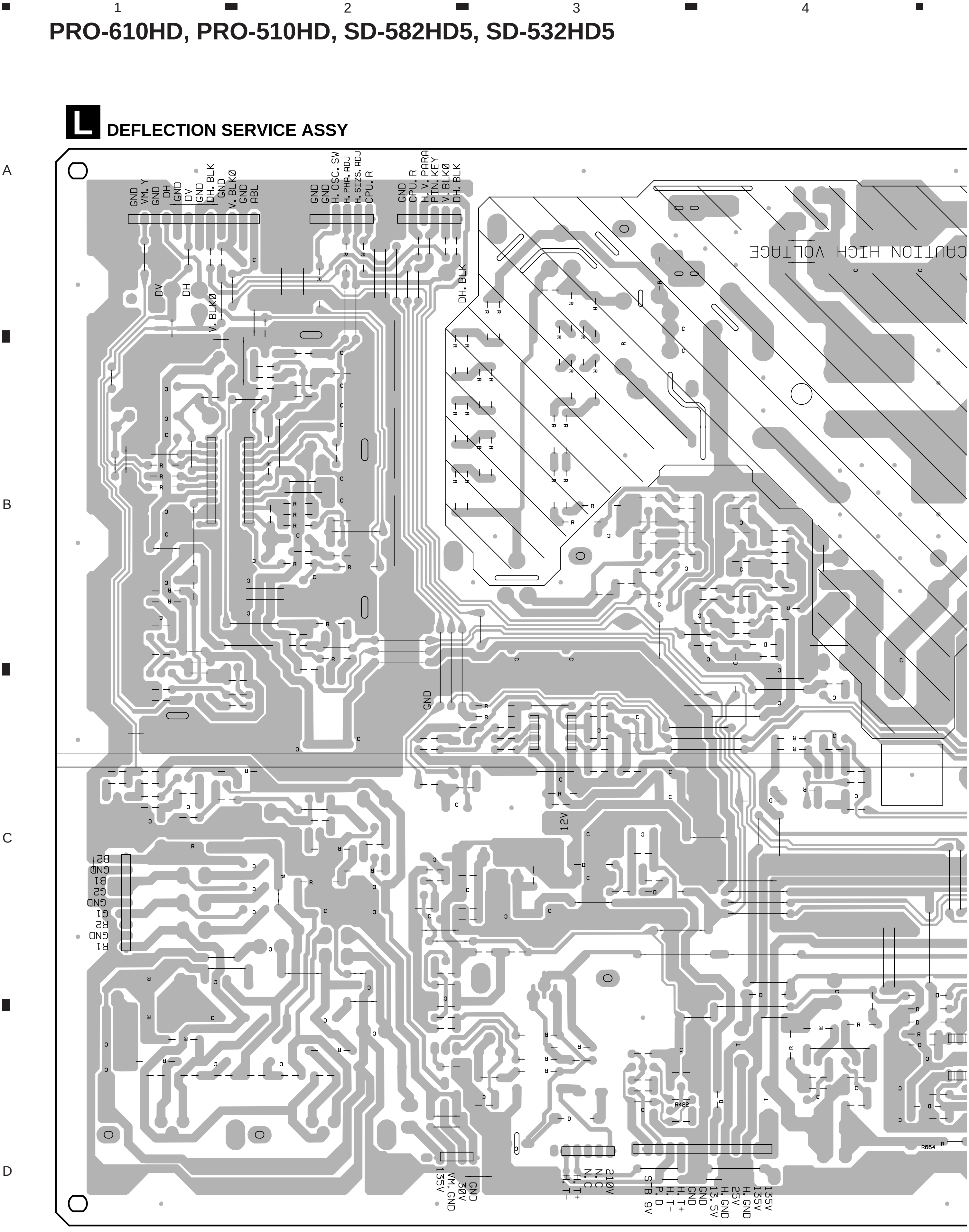
SIDE A

L-a L-b

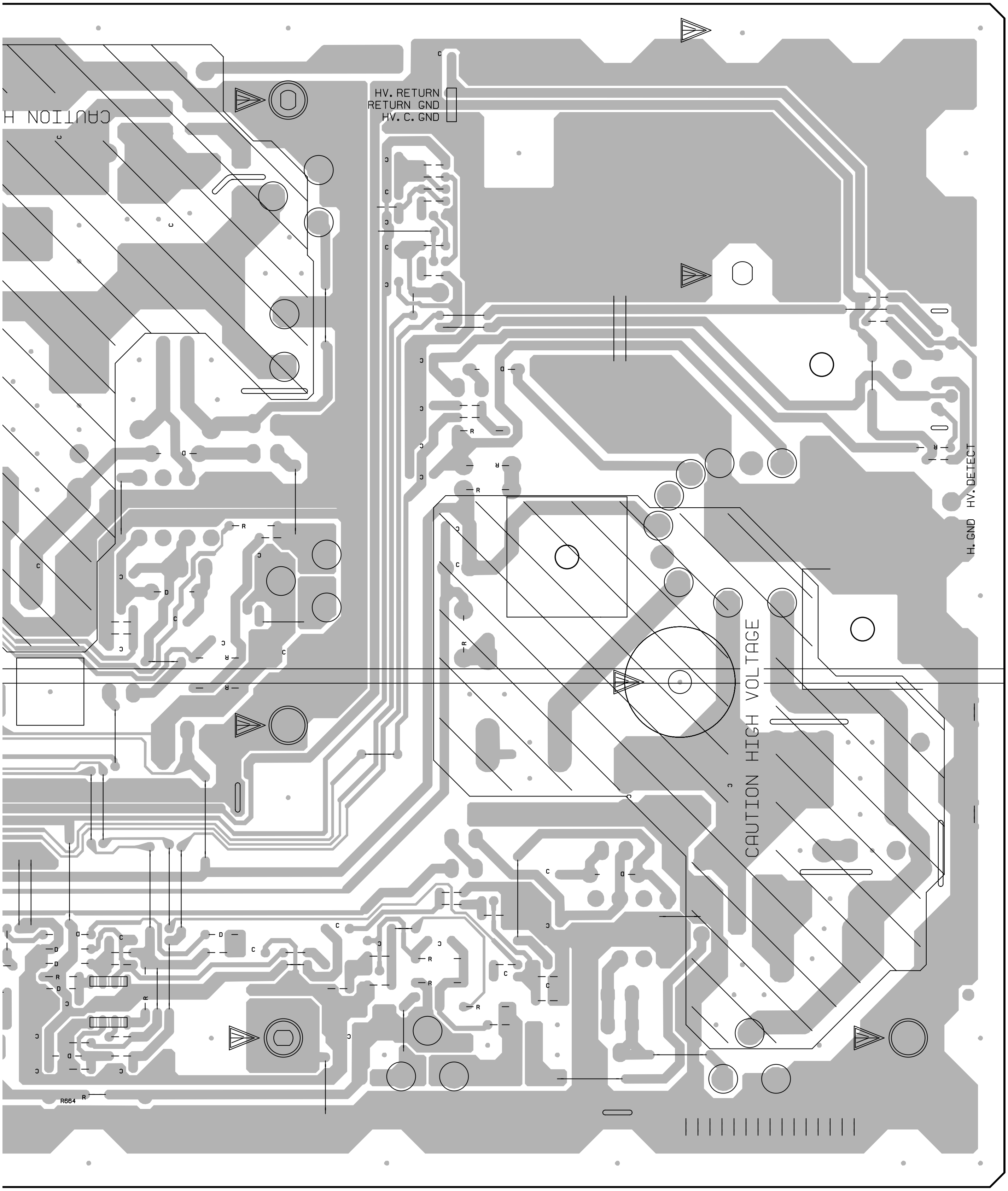

H CN2201 Y1
H CN2202 Y4
I CN1652 H3
To V1 FOCUS VR
To L3 Deflection Yoke (BLUE)
To L2 Deflection Yoke (GREEN)
To L1 Deflection Yoke (RED)
GND
VM. Y
GND
DH
GND
DV
GND
DH. BLK
GND
V. BLK0
GND
ABL
K6
K2
GND
GND
H. OSC. SW
H. PHA. ADJ
H. SIZS. ADJ
CPU. R
K3
RED
GND
CPU. R
H. V. PARA
PIN. KEY
V. BLK0
DH. BLK
CN305
CN308
CN306
V. OSC. ADJ
V. BLK. ADJ
VR303
VR302
VR301
DV
DH
V. BLK0
DH. BLK
V. OSC
TA8638N
IC301
AFC
H. OSC. ADJ
H. SIZE ADJ
CPU RESET
PIN. KEY
TP310
GND
ABL
2SC4686
Q753
2SC4686
Q754
K10
1. 2K
H. GND
CN751
SG751
H. OSC
TP304
CAUTION HIGH VOLTAGE
D317
D316
L302
C319
K7
K8
K9
T301
TP309
CN303
CN302
CN301
C322
C324
NJM4
IC303
C361
C360
ATK1126-A


O CN5207 P2
N CN5157 N2
M CN5106 M2
K5
(ANP1911–B)
CN801
B2 GND B1 G2 GND G1 R2 GND R1
2SC4793
2SA1837
P CN206 E6
K12
CN309
135V
VM. GND
30V
GND
M CN5102 M3
210V DOWN
210V ADJ
PQ30RV11(A)
2SD1276A
NJM4558 DXP
12V
12V DOWN
K4
CN307
H. T-
H. T+
N. C
N. C
210V
K1
STB 9V
P. D
H. T-
H. T+
GND
GND
13. 5V
H. GND
25V
H. GND
135V
135V
CN304
P CN207 E7
H. DEF OVERLOAD
HV OVERLOAD
135V
VR303
VR302
VR301
Q305
Q304
Q307
Q306
IC301
Q321
Q320
Q301
Q322
Q302
Q801–Q803
Q809
Q804–Q807
Q808
Q303
Q811
Q318
Q319
IC302
Q753
Q754
IC305
Q751 Q752
Q317
Q325
Q326
Q327
Q311 Q310
Q313 Q312
Q315 Q316
Q604
Q605
A
B
C
D
5
6
7
8

L DEFLECTION SERVICE ASSY


1
2
3
4
A
B
C
D
GND
VM.Y
GND
DH
GND
DV
GND
DH.BLK
GND
V.BLK0
GND
ABL
GND
GND
H.OSC.SW
H.PHA.ADJ
H.SIZS.ADJ
CPU.R
GND
CPU.R
H.V.PARA
PIN.KEY
V.BLK0
DH.BLK
DV
DH
V.BLK0
DH.BLK
CAUTION HIGH VOLTAGE
GND
12V
B2
GND
B1
G2
GND
G1
R2
GND
R1
R422
R664
GND
30V
VM.GND
135V
210V
N.C
N.C
H.T+
H.T-
STB 9V
P.D
H.T-
H.T+
GND
GND
13.5V
25V
H.GND
135V
H.GND
135V

SIDE B

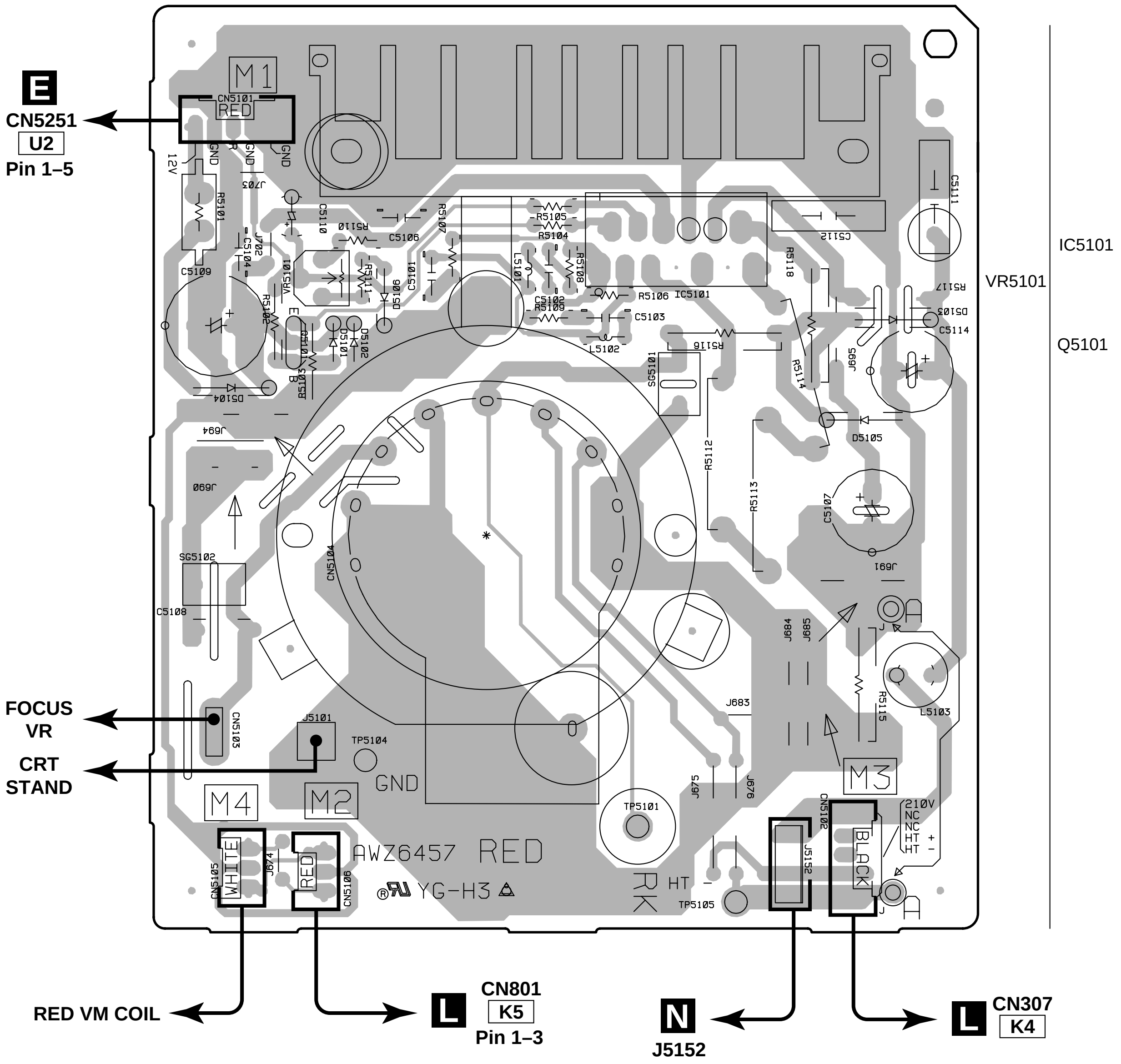

HV.RETURN
RETURN GND
HV.C.GND
CAUTION H
CAUTION HIGH VOLTAGE
H.GND HV.DETECT
R664
A
B
C
D

(ANP1911–B)

4.9 R CRT DRIVE ASSY

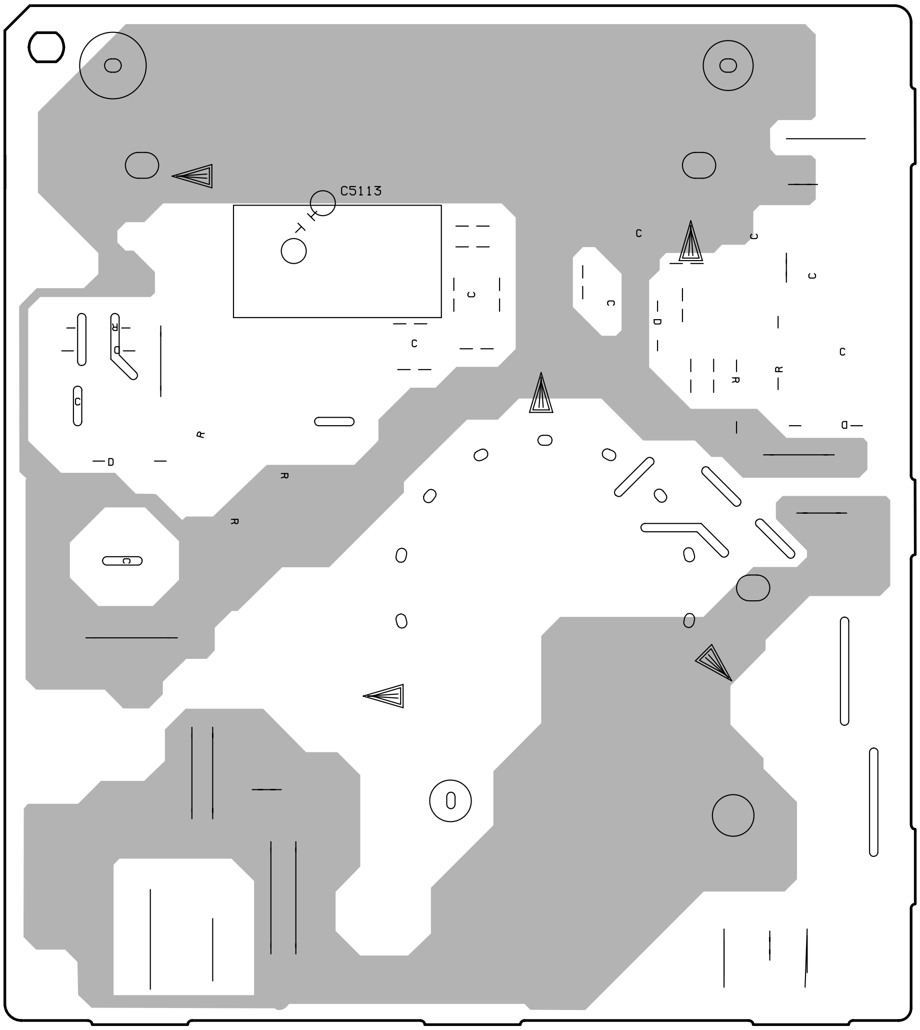
SIDE A

M R CRT DRIVE ASSY (ANP1944–A)


E
CN5251
U2
Pin 1–5
CN5101
RED
M1
12V
GND
R
GND
GND
J703
R5101
C5110
R5110
C5106
R5107
R5105
R5104
L5101
R5108
C5112
C5111
R5118
R5117
D5103
C5114
IC5101
VR5101
Q5101
J702
C5104
VR5101
C5109
C5101
D5106
R5111
R5102
D5101
D5102
R5103
C5102
R5109
R5106
C5103
L5102
R5116
SG5101
R5114
J695
D5104
J694
D5105
R5112
R5113
C5107
J690
J691
SG5102
C5108
CN5104
J684
J685
R5115
L5103
J683
FOCUS
VR
CRT
STAND
CN5103
J5101
TP5104
GND
M4
M2
M3
J675
J676
TP5101
CN5102
210V
NC
NC
HT +
HT −
BLACK
J5152
CN5105
WHITE
J674
RED
CN5106
AWZ6457 RED
YG-H3
RK
HT
TP5105
RED VM COIL
L
CN801
K5
Pin 1–3
N
J5152
L
CN307
K4

SIDE B

M R CRT DRIVE ASSY

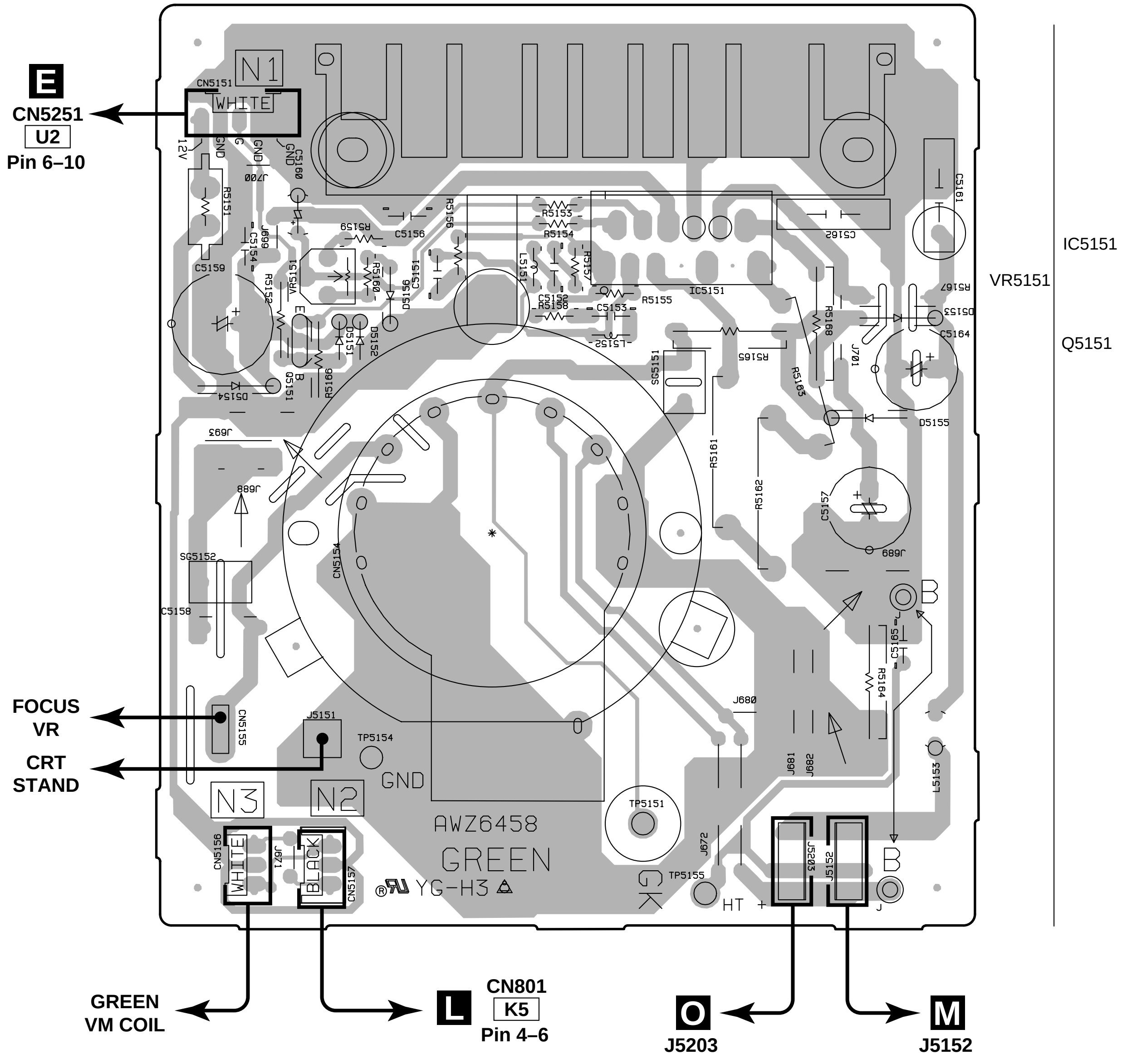

C5113
C
C
C
C
C
C
D
D
D
R
R
R
R
R
C

(ANP1944–A)

4.10 G CRT DRIVE ASSY

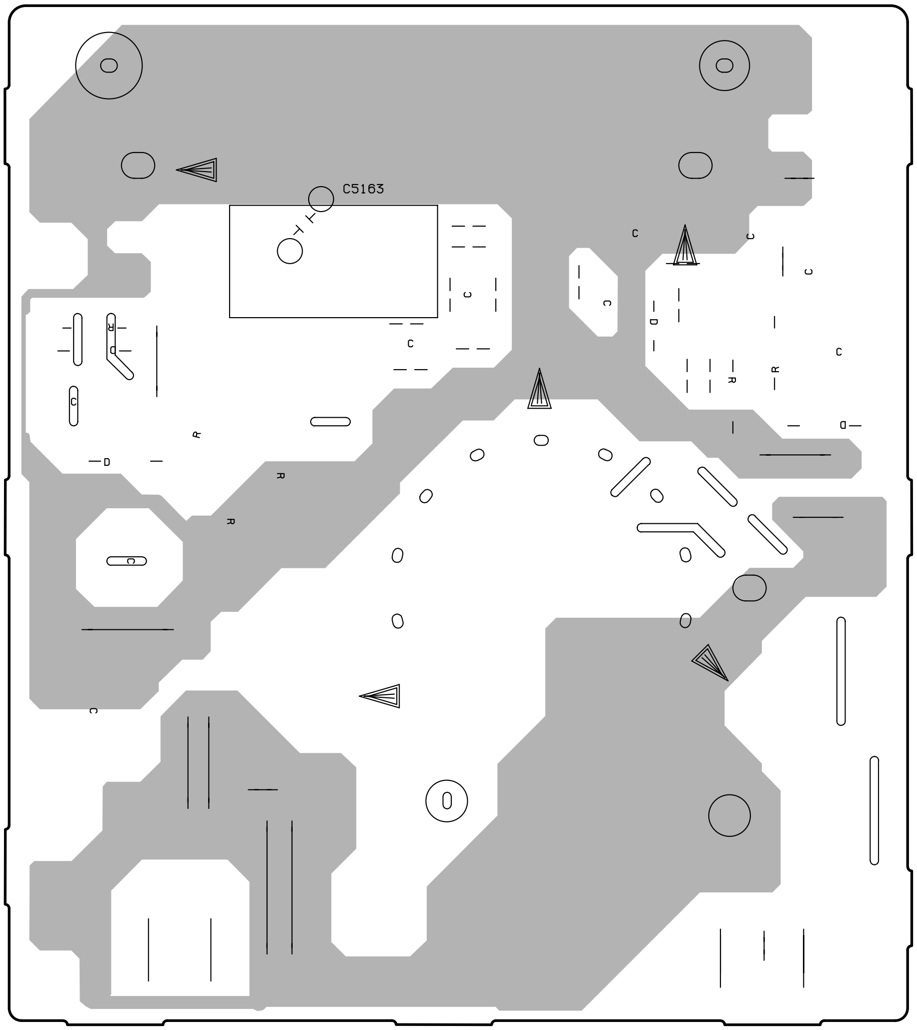
SIDE A

N G CRT DRIVE ASSY (ANP1944–A)


E
CN5251
U2
Pin 6–10
N1
CN5151
WHITE
12V
GND
G
GND
GND
C5160
J700
R5151
J699
C5154
C5159
R5152
VR5151
R5159
R5160
D5156
C5151
C5156
R5156
L5151
R5153
R5154
R5157
C5152
R5158
C5153
L5152
R5155
IC5151
C5162
C5161
R5167
D5153
C5164
R5168
J701
R5165
SG5151
R5163
D5154
Q5151
R5166
D5151
D5152
D5155
J693
J688
R5161
R5162
C5157
J689
SG5152
C5158
CN5154
C5165
R5164
J680
FOCUS
VR
CN5155
CRT
STAND
J5151
TP5154
GND
J681
J682
L5153
N3
N2
AWZ6458
GREEN
TP5151
CN5156
WHITE
J671
BLACK
CN5157
YG-H3
GK
TP5155
J672
HT
J5203
J5152
B
J
IC5151
VR5151
Q5151
GREEN
VM COIL
L
CN801
K5
Pin 4–6
O
J5203
M
J5152

SIDE B

N G CRT DRIVE ASSY

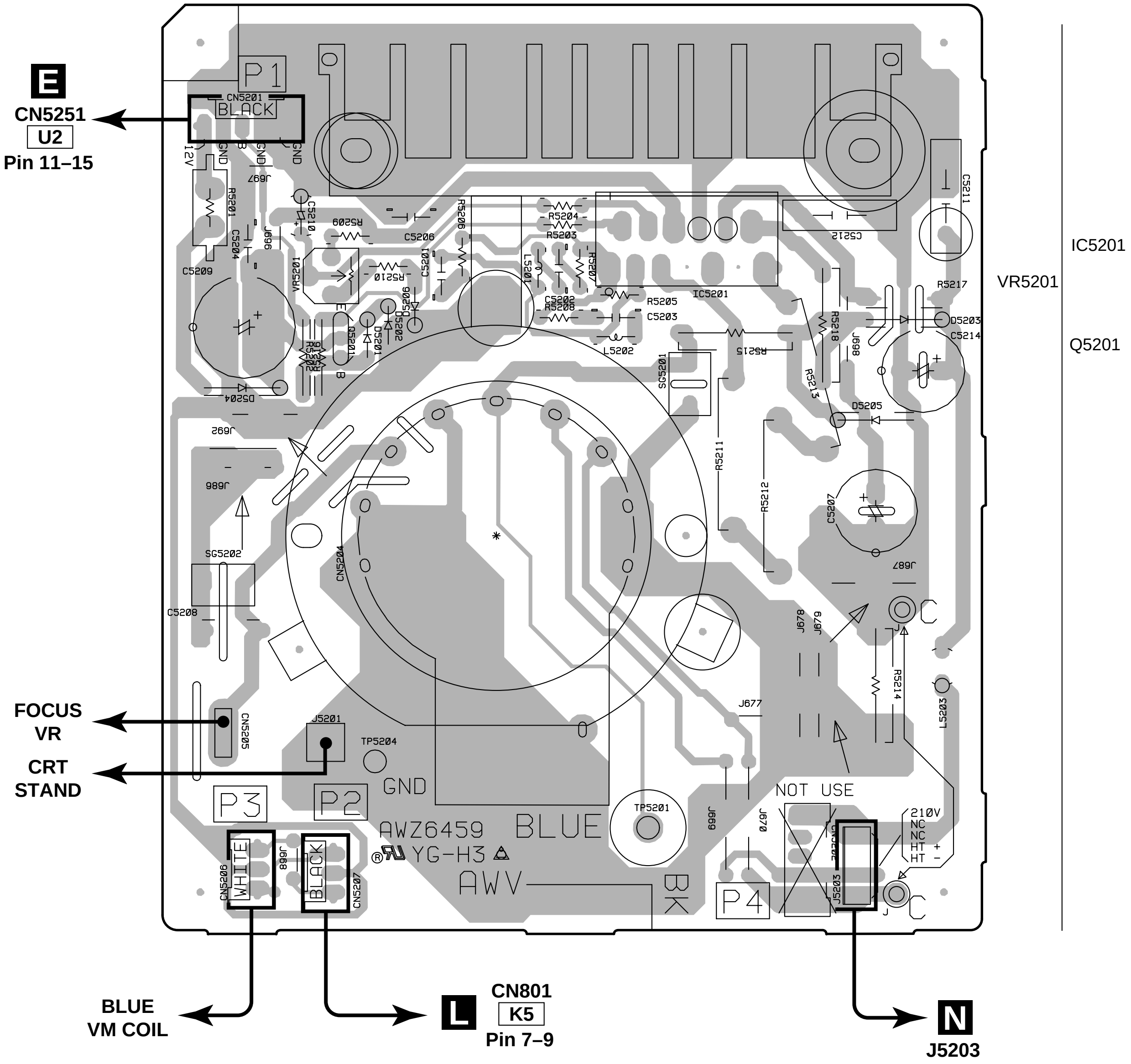

C5163
C
C
C
C
C
D
R
R
C
R
R
D
R
C
C
D
R
C

(ANP1944–A)

4.11 B CRT DRIVE ASSY

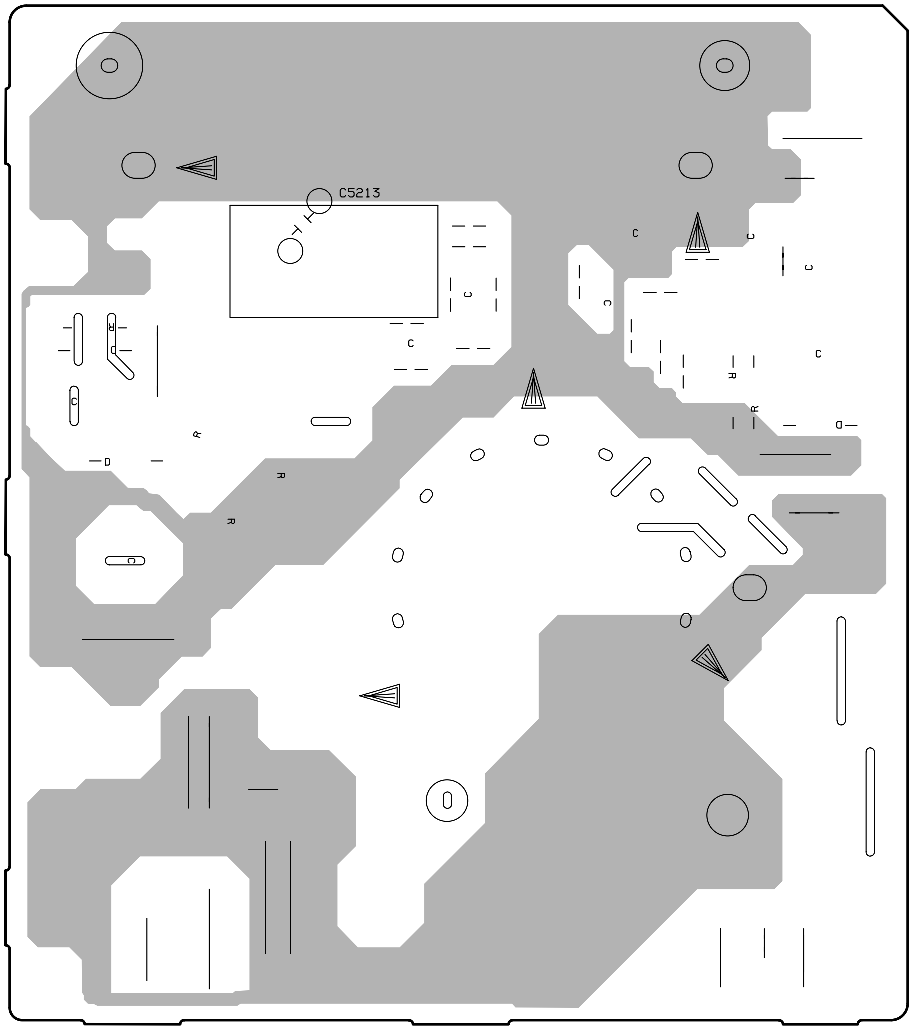
SIDE A

O B CRT DRIVE ASSY (ANP1944–A)


E
CN5251
U2
Pin 11–15
FOCUS
VR
CRT
STAND
BLUE
VM COIL
L
CN801
K5
Pin 7–9
N
J5203
IC5201
VR5201
Q5201
P1
CN5201
BLACK
12V
GND
B
GND
G
GND
J697
R5201
C5204
C5209
C5210
J696
R5209
C5206
VR5201
R5210
C5201
R5206
D5206
D5202
D5201
Q5201
L5201
R5204
R5203
R5207
C5202
R5208
R5205
C5203
IC5201
L5202
C5212
C5211
R5217
D5203
C5214
R5218
J698
R5215
SG5201
R5213
D5205
D5204
J692
J686
SG5202
C5208
R5211
R5212
C5207
J687
CN5204
J678
J679
R5214
L5203
J677
CN5205
J5201
TP5204
GND
P3
P2
AWZ6459
BLUE
YG-H3
AWV
TP5201
J669
J670
NOT USE
210V
NC
NC
HT +
HT −
CN5206
WHITE
J668
BLACK
CN5207
BK
P4
J5203

SIDE B

O G CRT DRIVE ASSY

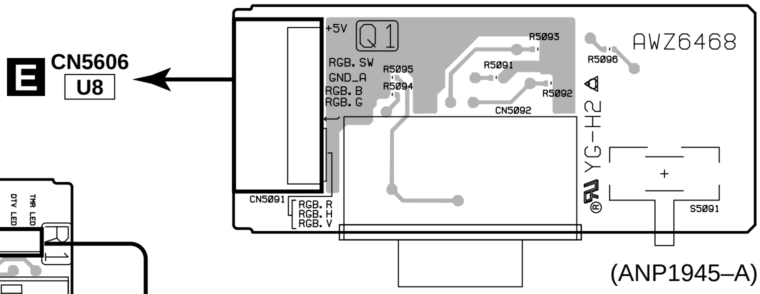


(ANP1944–A)

4.12 AUDIO ASSY, RGB SW ASSY, FRONT CONTROL ASSY and AUDIO ASSY

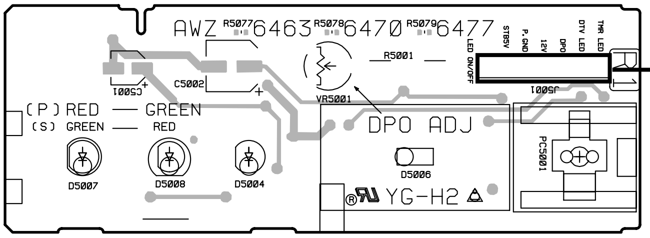
SIDE A

F RGB SW ASSY


E
CN5606
U8
+5V
Q1
RGB. SW
GND_A
RGB. B
RGB. G
R5095
R5094
R5093
R5091
R5092
R5096
AWZ6468
CN5092
CN5091
RGB. R
RGB. H
RGB. V
YG-H2
S5091

(ANP1945–A)

T LED DPO ASSY

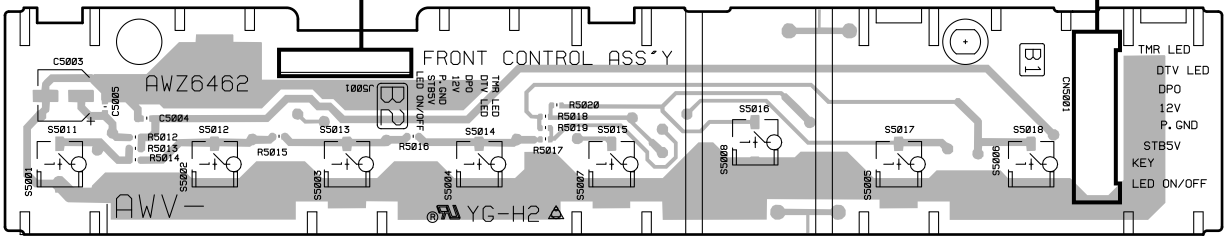

AWZ 6463 6470 6477
R5077
R5078
R5079
STB5V
P. GND
12V
DPO
DTV LED
TMR LED
LED ON/OFF
R5001
J5001
C5002
C5001
VR5001
(P) RED — GREEN
(S) GREEN — RED
DPO ADJ
D5006
PC5001
D5007
D5008
D5004
YG-H2

VR5001

(ANP1945–A)

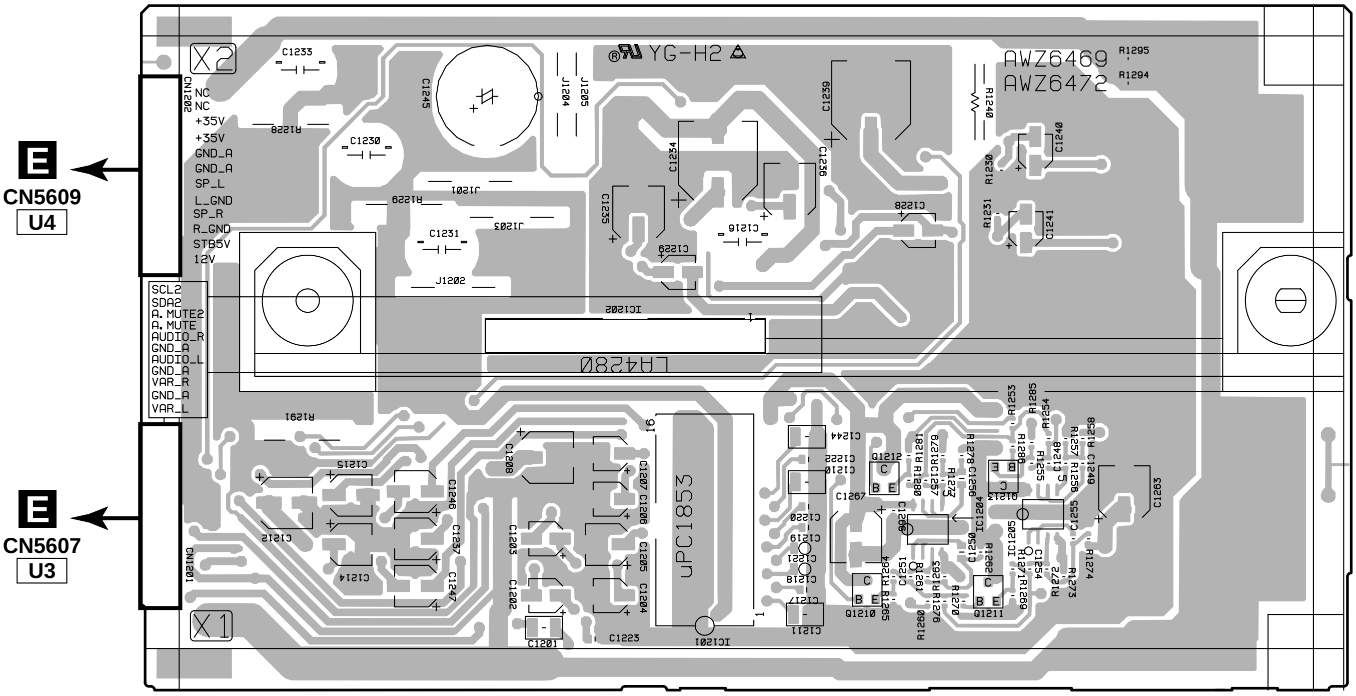
A
CN2451
T6

S FRONT CONTROL ASSY


C5003
AWZ6462
J5001
B2
FRONT CONTROL ASS´Y
STB5V
P. GND
12V
DPO
DTV LED
TMR LED
LED ON/OFF
C5005
C5004
S5011
R5012
R5013
R5014
S5012
R5015
S5013
R5016
S5014
R5020
R5018
R5019
S5015
R5017
S5016
S5008
S5017
S5018
S5005
S5006
B1
CN5001
TMR LED
DTV LED
DPO
12V
P. GND
STB5V
KEY
LED ON/OFF
S5001
S5002
S5003
S5004
S5007
AWV-
YG-H2

(ANP1945–A)

G AUDIO ASSY

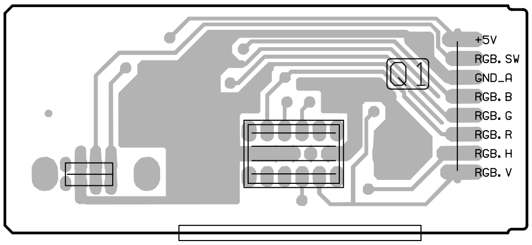

E
CN5609
U4
E
CN5607
U3
X2
C1233
C1245
J1204
J1205
YG-H2
AWZ6469
AWZ6472
R1295
R1294
CN1202
NC
NC
+35V
+35V
GND_A
GND_A
SP_L
L_GND
SP_R
R_GND
STB5V
12V
R1228
C1230
R1229
J1201
J1203
C1231
J1202
C1234
C1235
C1236
C1239
C1216
C1229
C1228
R1240
C1240
R1230
R1231
C1241
SCL2
SDA2
A. MUTE2
A. MUTE
AUDIO_R
GND_A
AUDIO_L
GND_A
VAR_R
GND_A
VAR_L
IC1202
LA4280
R1291
C1215
C1212
C1214
C1246
C1247
C1208
C1203
C1202
C1207
C1206
C1205
C1204
uPC1853
IC1201
C1201
C1223
C1244
C1222
C1210
C1267
C1220
C1219
C1218
C1217
C1211
Q1212
Q1210
Q1211
Q1213
IC1204
IC1205
R1253
R1285
R1254
C1263
X1
CN1201

IC1202 IC1201 Q1212 Q1213 IC1204 IC1205 Q1210 Q1211

(ANP1945–A)

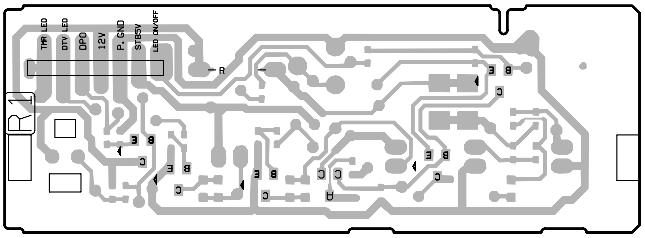
SIDE B

F RGB SW ASSY


Q1
+5V
RGB.SW
GND_A
RGB.B
RGB.G
RGB.R
RGB.H
RGB.V

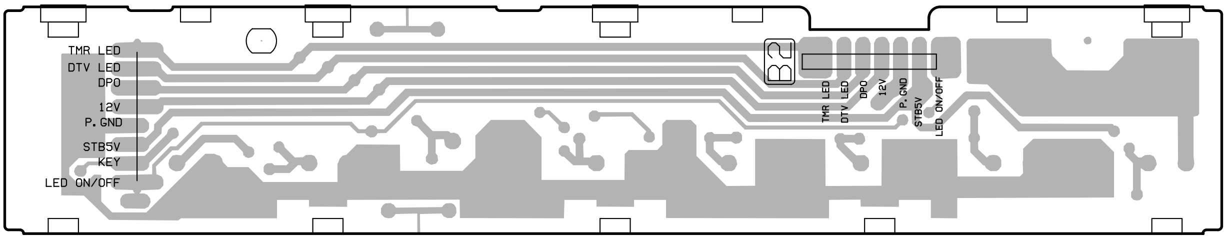
(ANP1945–A)

T LED DPO ASSY


TMR LED
DTV LED
DPO
12V
P.GND
STB5V
LED ON/OFF
R1

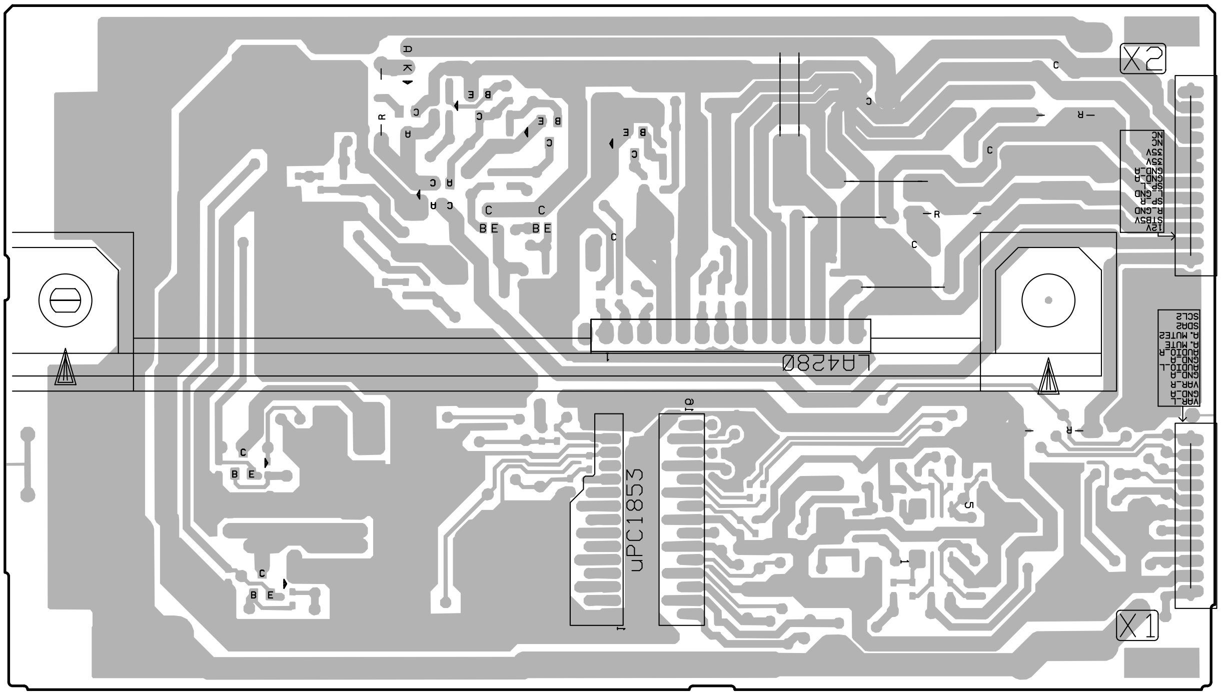
(ANP1945–A)

S FRONT CONTROL ASSY


TMR LED
DTV LED
DPO
12V
P.GND
STB5V
KEY
LED ON/OFF
B2
TMR LED
DTV LED
DPO
12V
P.GND
STB5V
LED ON/OFF

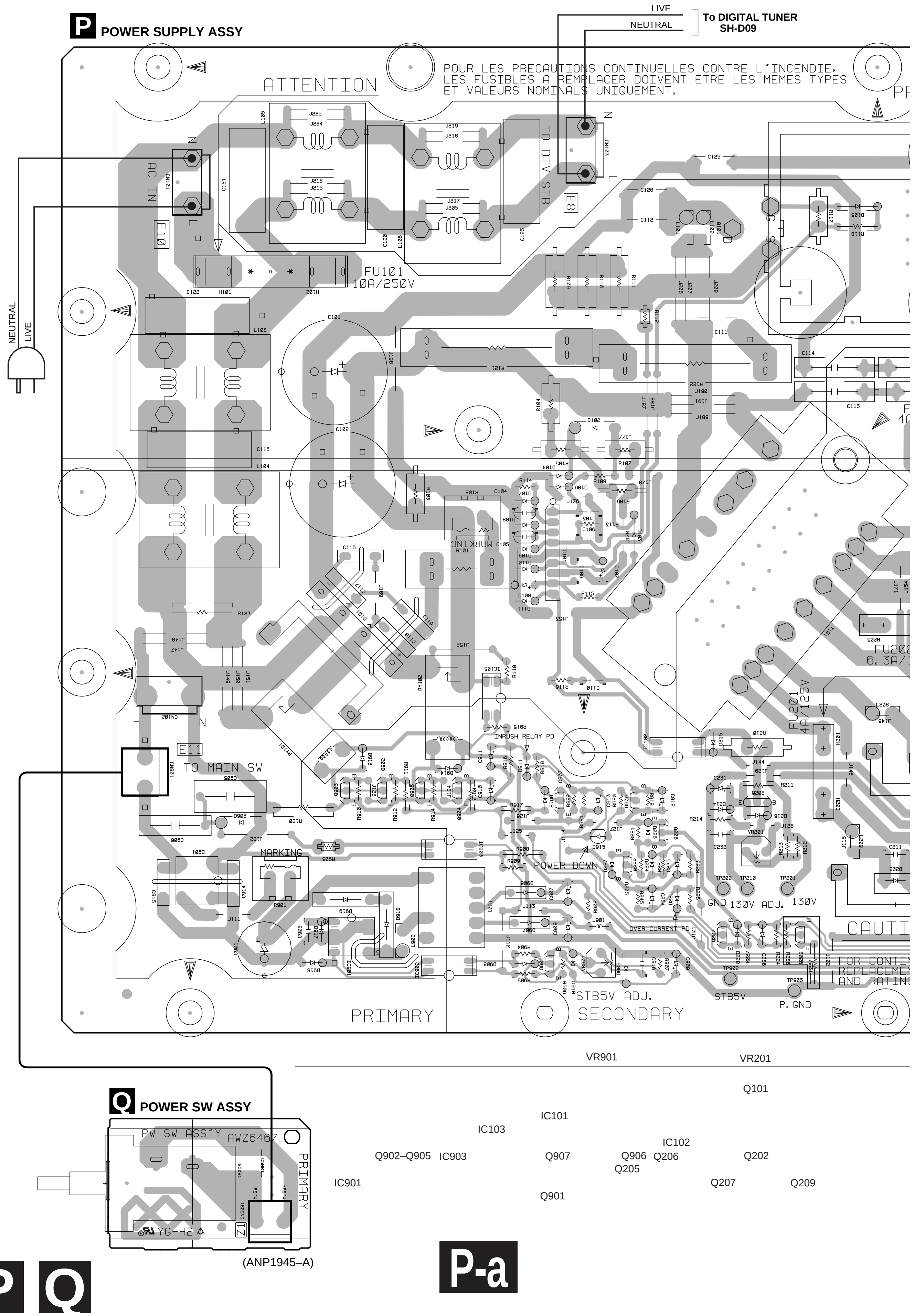
(ANP1945–A)

G AUDIO ASSY

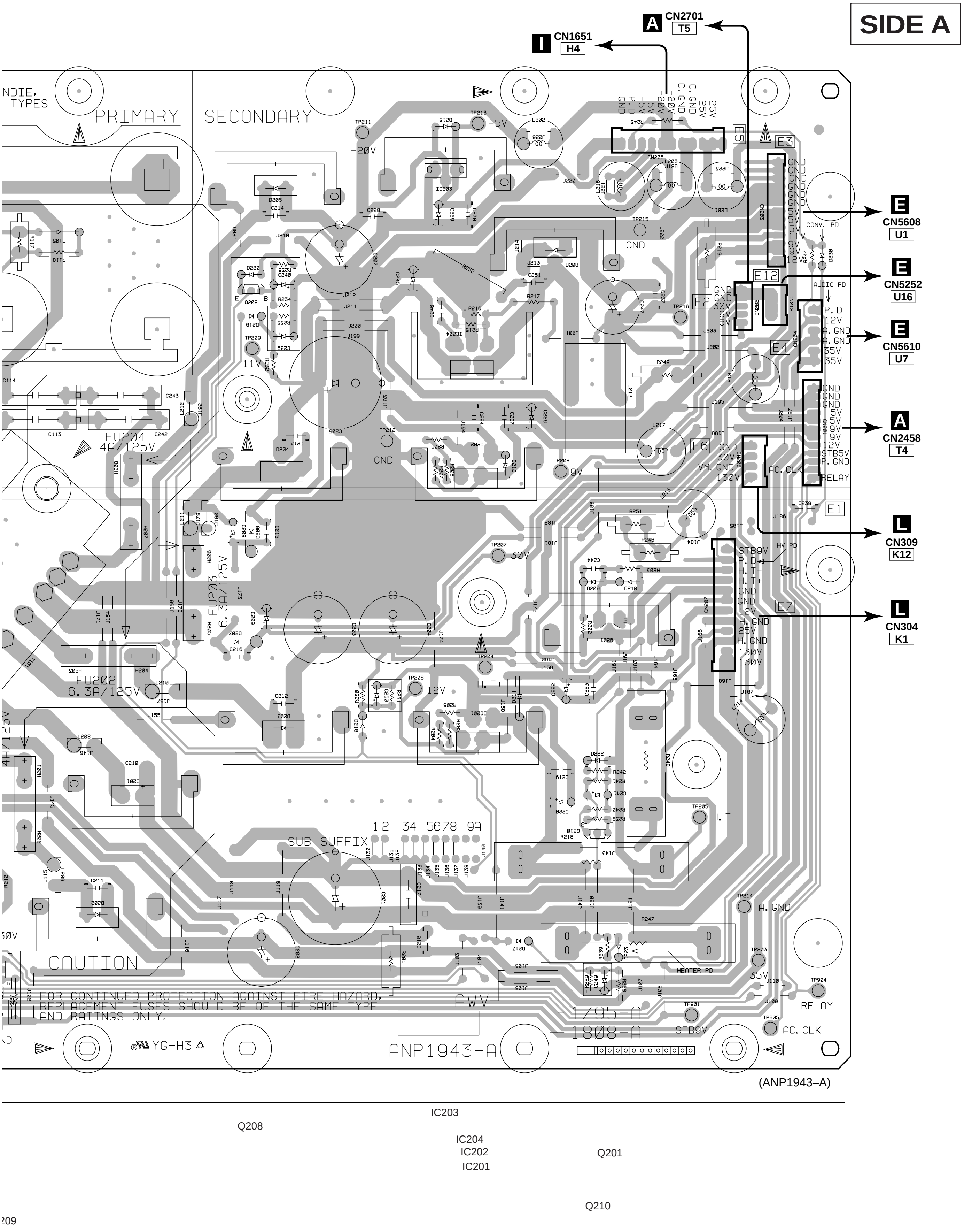

X2
LA4280
uPC1853
X1

(ANP1945–A)

4.13 POWER SUPPLY ASSY and POWER SW ASSY


1
2
3
4
A
B
C
D
P POWER SUPPLY ASSY
LIVE
NEUTRAL
To DIGITAL TUNER SH-D09
POUR LES PRECAUTIONS CONTINUELLES CONTRE L'INCENDIE, LES FUSIBLES A REMPLACER DOIVENT ETRE LES MEMES TYPES ET VALEURS NOMINALS UNIQUEMENT.
ATTENTION
AC IN
CN101
E10
TO DTV STB
CN103
E8
FU101 10A/250V
NEUTRAL
LIVE
MARKING
INRUSH RELAY PD
CN102
E11
TO MAIN SW
CN901
POWER DOWN
OVER CURRENT PD
FU201 4A/125V
FU202 6.3A/
GND
130V ADJ.
130V
STB5V ADJ.
STB5V
P.GND
PRIMARY
SECONDARY
CAUTI
FOR CONTIN
REPLACEMEN
AND RATING
VR901
VR201
Q101
IC101
IC103
IC102
Q902–Q905
IC903
Q907
Q906
Q206
Q202
Q205
IC901
Q207
Q209
Q901
Q POWER SW ASSY
PW SW ASS'Y AWZ6467
PRIMARY
YG-H2
CN5001
Z1
(ANP1945–A)
P-a

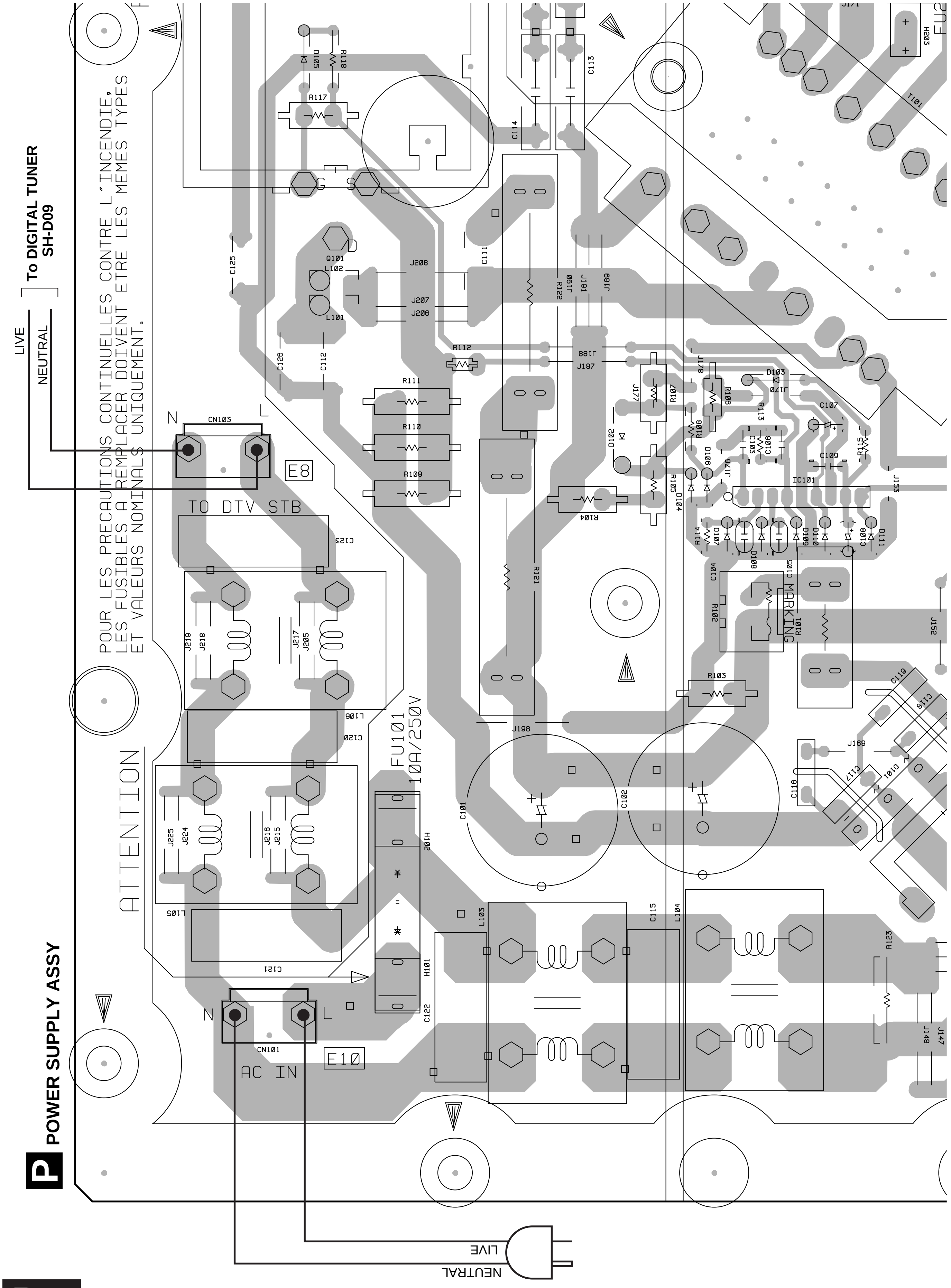
SIDE A

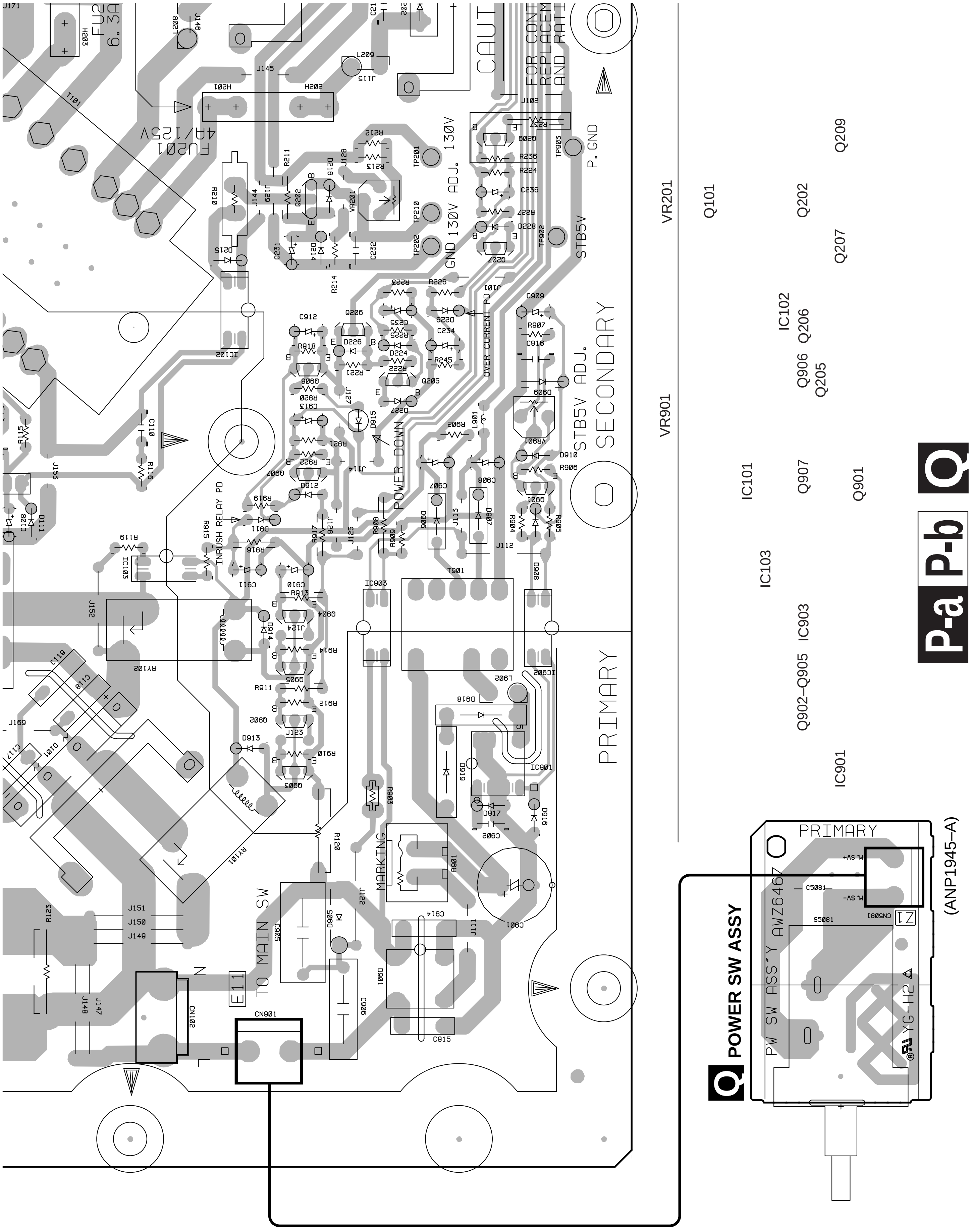

I CN1651 H4
A CN2701 T5
E CN5608 U1
E CN5252 U16
E CN5610 U7
A CN2458 T4
L CN309 K12
L CN304 K1
PRIMARY
SECONDARY
FU204 4A/125V
FU203 6.3A/125V
FU202 6.3A/125V
CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSES SHOULD BE OF THE SAME TYPE AND RATINGS ONLY.
SUB SUFFIX 12 34 5678 9A
ANP1943-A
1795-A
1808-A
AWV
YG-H3
25V 25V C.GND C.GND -20V -20V -5V -5V P.D GND
GND GND GND GND GND GND 5V 5V 5V 11V 9V 12V
CONV. PD
AUDIO PD
GND GND 30V 9V 5V
P.D 12V A.GND A.GND 35V 35V
GND GND GND 5V 5V 9V 9V 12V STB5V P.GND RELAY
GND 30V VM.GND 130V
AC.CLK
STB9V P.D H.T- H.T+ GND GND 12V H.GND 25V H.GND 130V 130V
HV PD
HEATER PD
-20V -5V 11V GND 9V 30V 12V H.T+ H.T- A.GND 35V RELAY STB9V AC.CLK
E1 E2 E3 E4 E5 E6 E7 E12
(ANP1943–A)
IC203
Q208
IC204
IC202
IC201
Q201
Q210
209

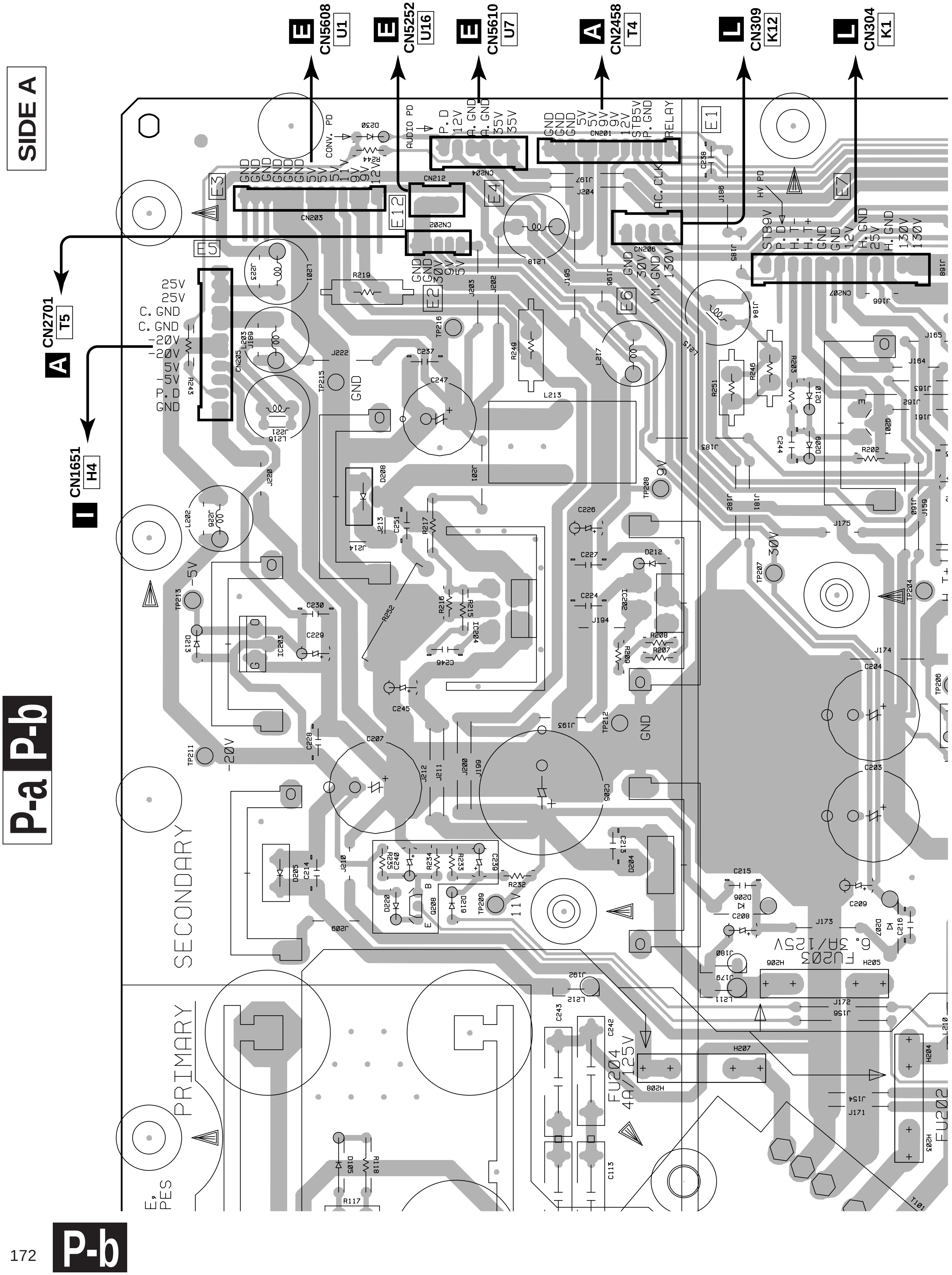
SIDE A

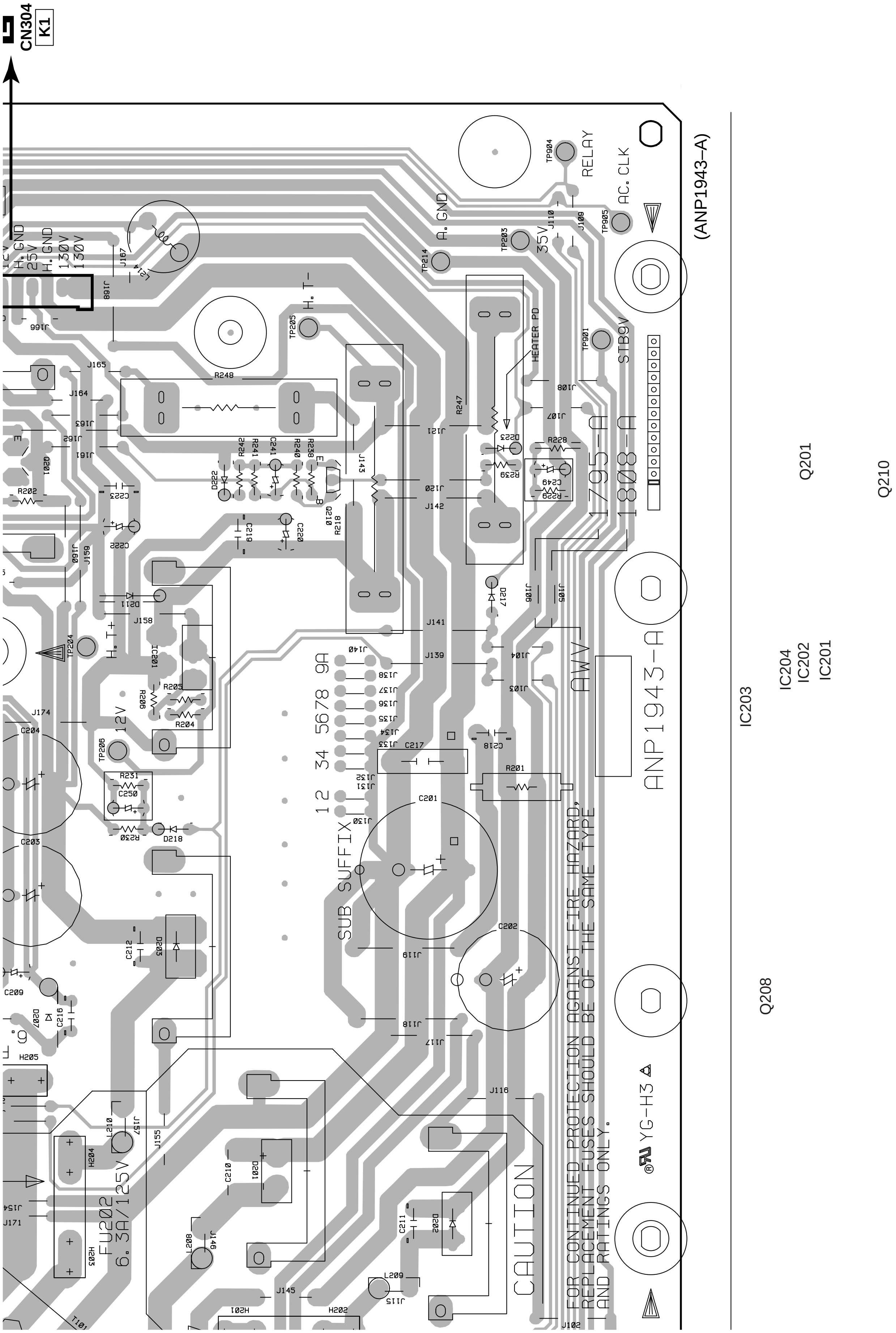
P-a P-b

P POWER SUPPLY ASSY


To DIGITAL TUNER
SH-D09
LIVE
NEUTRAL
POUR LES PRECAUTIONS CONTINUELLES CONTRE L'INCENDIE,
LES FUSIBLES A REMPLACER DOIVENT ETRE LES MEMES TYPES
ET VALEURS NOMINALS UNIQUEMENT.
ATTENTION
N
L
CN103
E8
TO DTV STB
C123
L106
C120
L105
C121
FU101
10A/250V
H102
H101
C122
N
L
CN101
E10
AC IN
D105
R118
R117
G
S
D
Q101
L102
L101
C125
C126
C112
J208
J207
J206
R112
R111
R110
R109
C114
C113
C111
R122
J190
J191
J189
J188
J187
J177
R107
J178
R106
R113
D103
J170
C107
R108
D106
C103
C106
C109
R115
D102
R105
D104
J176
IC101
J153
R104
R121
R114
D107
D108
D109
D110
C108
D111
C104
C105
R102
MARKING
R101
J152
R103
J198
C101
C102
J169
C116
C117
D101
C119
C118
L103
C115
L104
R123
J147
J148
T101
J171
H203
FU2
LIVE
NEUTRAL


A
B
C
D
CAUTION
FOR CONT
REPLACEM
AND RATI
FU201
4A/125V
6.3A
T101
H201
H202
J145
L209
J115
L208
J146
J102
P.GND
TP903
TP201
TP210
TP202
TP902
130V ADJ. 130V
GND 130V
STB5V
STB5V ADJ.
SECONDARY
PRIMARY
OVER CURRENT PD
POWER DOWN
INRUSH RELAY PD
TO MAIN SW
MARKING
E11
N
L
CN901
CN102
RY101
RY102
D101
IC102
IC103
IC901
IC902
IC903
T901
L901
L902
C901
C902
C906
C914
C915
D901
D905
D913
D914
D916
D917
D918
D919
R901
R903
R120
R123
J147
J148
J149
J150
J151
J152
J153
J169
J171
VR201
VR901
Q101
Q202
Q209
Q207
IC102
Q206
Q906
Q205
IC101
Q907
Q901
IC103
IC903
Q902–Q905
IC901
P-a
P-b
Q
POWER SW ASSY
PW SW ASS'Y AWZ6467
PRIMARY
M.SW+
M.SW-
C5081
S5081
CN5081
YG-H2
(ANP1945–A)

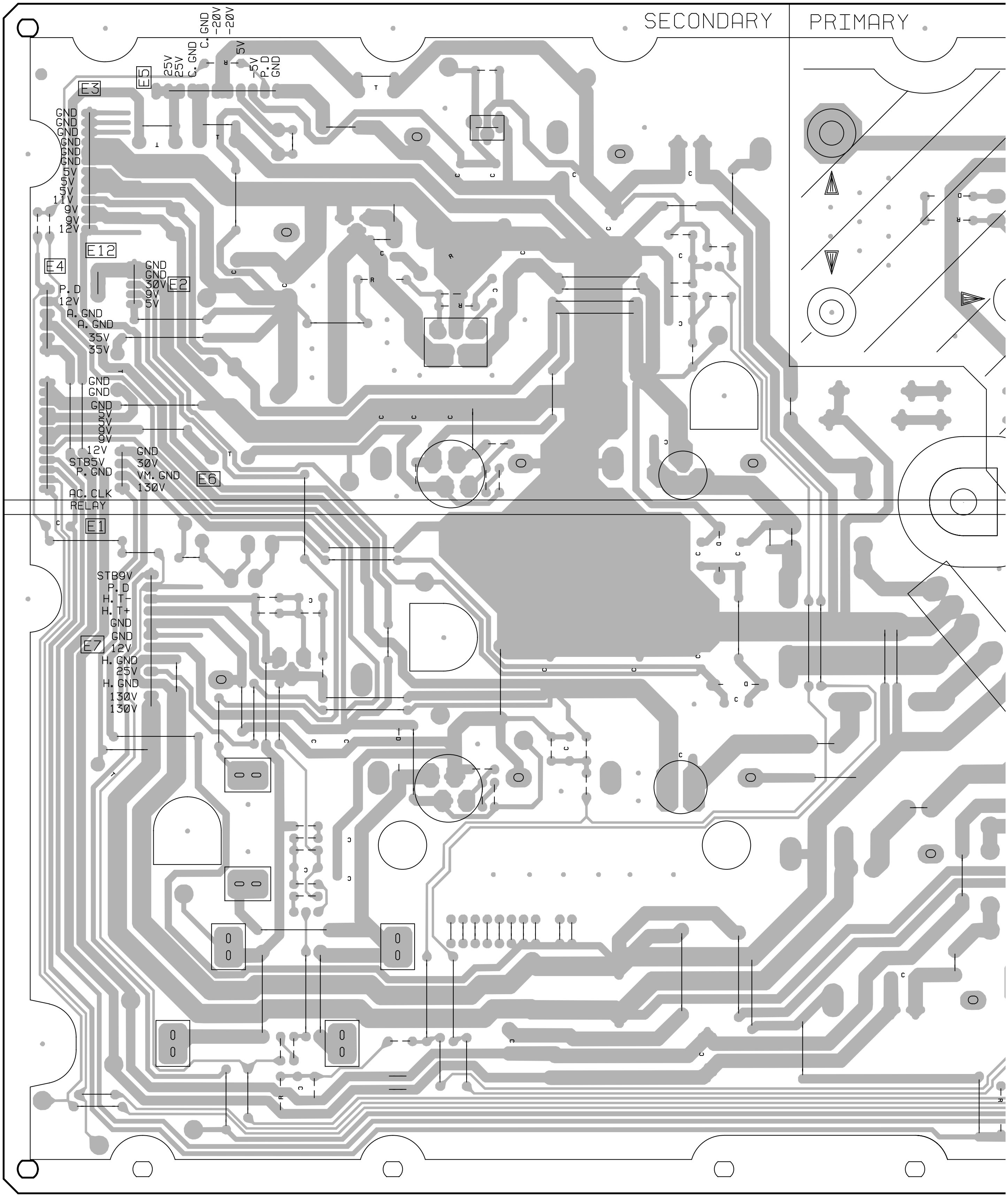

SIDE A
E CN5608 U1
E CN5252 U16
E CN5610 U7
A CN2458 T4
L CN309 K12
L CN304 K1
A CN2701 T5
I CN1651 H4
P-a P-b
GND GND GND GND GND GND 5V 5V 5V 11V 9V 9V 12V
CONV. PD
AUDIO PD
P. D 12V A. GND A. GND 35V 35V
GND GND GND 5V 5V 9V 9V 12V STB5V P. GND RELAY
AC. CLK
HV PD
STB9V P. D. H. T- H. T+ GND GND 12V H. GND 25V H. GND 130V 130V
GND GND 30V 9V 5V
GND 30V VM. GND 130V
25V 25V C. GND C. GND -20V -20V 5V -5V P. D GND
CN203 CN212 CN202 CN204 CN201 CN206 CN207 CN205
E1 E2 E3 E4 E5 E6 E7 E12
-5V
-20V
9V
30V
11V
GND
SECONDARY
PRIMARY
6. 3A/125V FU203
FU204 4A/125V
FU202
E, PES
T101


CN304
K1
(ANP1943–A)
RELAY
AC. CLK
A. GND
35V
H. T-
HEATER PD
STB9V
H. GND
25V
H. GND
130V
130V
H. T+
12V
1795-A
1808-A
ANP1943-A
AWV
SUB SUFFIX 12 34 5678 9A
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSES SHOULD BE OF THE SAME TYPE AND RATINGS ONLY.
CAUTION
YG-H3
FU202 6.3A/125V
R248
R247
R201
C201
C202
C203
C204
TP204
TP205
TP206
TP214
TP203
TP904
TP905
TP901
Q201
Q210
IC203
IC204
IC202
IC201
Q208
A
B
C
D

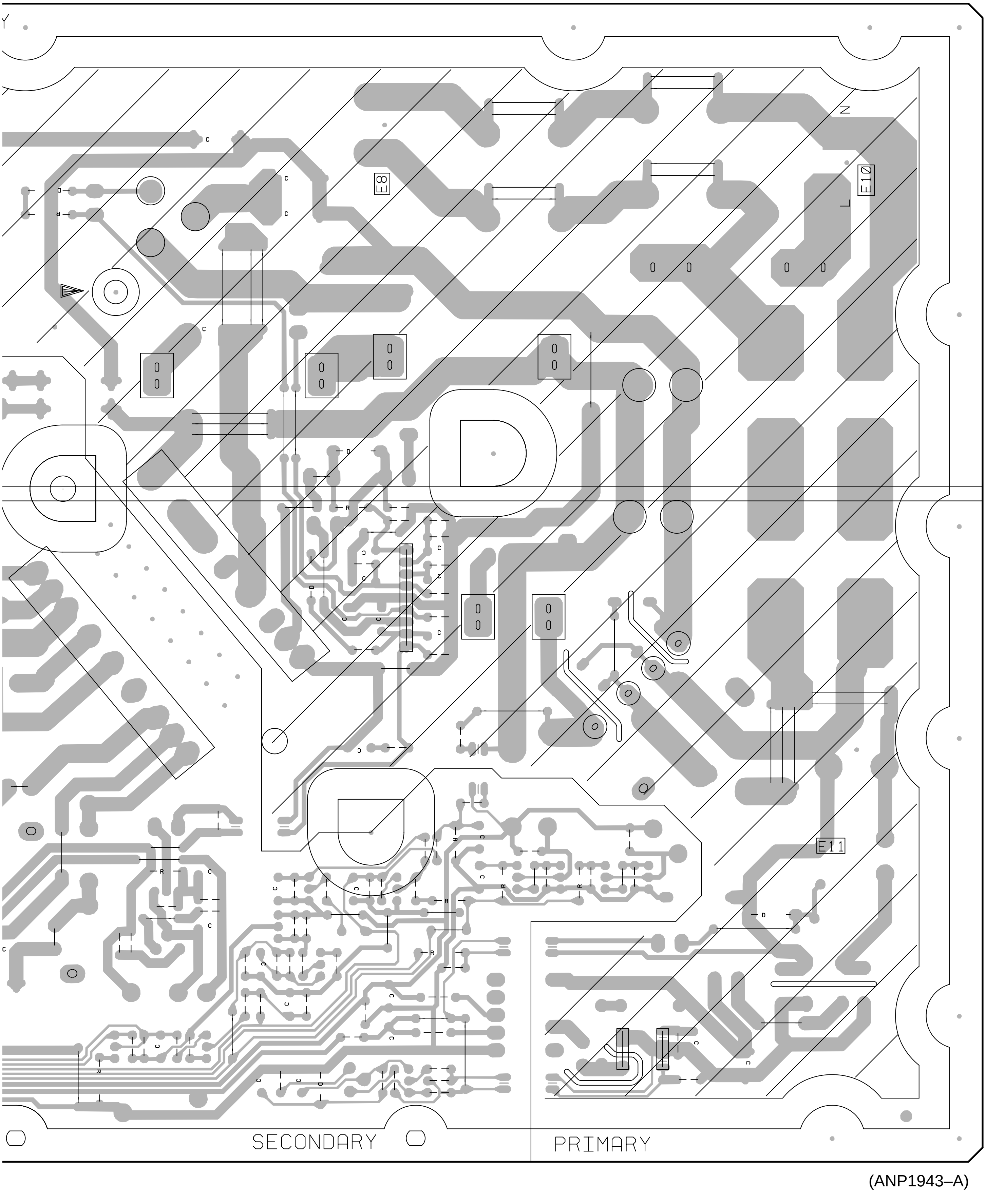
P-a P-b

P POWER SUPPLY ASSY

A
B
C
D


SECONDARY
PRIMARY
C. GND
-20V
-20V
5V
25V
25V
C. GND
-5V
P. D
GND
E5
E3
GND
GND
GND
GND
GND
GND
5V
5V
5V
11V
9V
9V
12V
E12
E4
GND
GND
30V
9V
5V
E2
P. D
12V
A. GND
A. GND
35V
35V
GND
GND
GND
5V
5V
9V
9V
12V
STB5V
P. GND
GND
30V
VM. GND
130V
E6
AC. CLK
RELAY
E1
STB9V
P. D
H. T-
H. T+
GND
GND
E7
12V
H. GND
25V
H. GND
130V
130V

SIDE B


E8
E10
E11
SECONDARY
PRIMARY
A
B
C
D

(ANP1943–A)

5. PCB PARTS LIST

NOTES :
- *Parts marked by "* NSP *" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560 Ω → 56 × 10^{1} → 561 .... RD1/4PU $\boxed{5}\,\boxed{6}\,\boxed{1}$ J
47k Ω → 47 × 10^{3} → 473 .... RD1/4PU $\boxed{4}\,\boxed{7}\,\boxed{3}$ J
0.5 Ω → R50 .... RN2H $\boxed{R}\,\boxed{5}\,\boxed{0}$ K
1 Ω → 1R0 .... RS1P $\boxed{1}\,\boxed{R}\,\boxed{0}$ K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 × 10^{1} → 5621 .... RN1/4PC $\boxed{5}\,\boxed{6}\,\boxed{2}\,\boxed{1}$ F

- *Parts marked by ☆ are important parts which relate in X-rays radiation. If any of these parts need to be replaced, always replace with specified parts.*
- *Parts marked by × are important parts which relate in X-rays radiation. If a failure occurs in any of these parts, replace the printed circuit board ASSY where the relevant part has already been adjusted as a working component. Do not replace the actual part itself. If any part marked by × is replaced, there is danger of being exposed to X-rays.*

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	Part No.				Remarks
		PRO-610HD	PRO-510HD	SD-582HD5	SD-532HD5	
	POWER SUPPLY ASSY	AWV1795	AWV1795	AWV1808	AWV1808	
☆	DEFLECTION SERVICE ASSY	AWV1809	AWV1809	AWV1809	AWV1809	
	AMP ASSY	AWV1797	AWV1797	AWV1797	AWV1797	
	├─ CONV. AMP ASSY	AWZ6456	AWZ6456	AWZ6456	AWZ6456	
	├─ R CRT DRIVE ASSY	AWZ6457	AWZ6457	AWZ6457	AWZ6457	
	├─ G CRT DRIVE ASSY	AWZ6458	AWZ6458	AWZ6458	AWZ6458	
	└─ B CRT DRIVE ASSY	AWZ6459	AWZ6459	AWZ6459	AWZ6459	
NSP	DIGITAL CONV. ASSY	AWV1798	AWV1798	AWV1803	AWV1803	
	├─ DIGITAL CONV. ASSY	AWZ6460	AWZ6460	AWZ6460	AWZ6460	
	├─ CONNECTOR ASSY	AWZ6461	AWZ6461	AWZ6461	AWZ6461	
	├─ FRONT CONTROL ASSY	AWZ6462	AWZ6462	AWZ6462	AWZ6462	
	├─ LED DPO ASSY	AWZ6463	AWZ6463	AWZ6470	AWZ6470	
	├─ BNC ASSY	AWZ6464	AWZ6464	Not used	Not used	
	├─ SR ASSY	AWZ6465	AWZ6465	AWZ6465	AWZ6465	
	├─ FRONT INPUT ASSY	AWZ6466	AWZ6466	AWZ6471	AWZ6471	
	├─ POWER SW ASSY	AWZ6467	AWZ6467	AWZ6467	AWZ6467	
	├─ RGB SW ASSY	AWZ6468	AWZ6468	AWZ6468	AWZ6468	
	└─ AUDIO ASSY	AWZ6472	AWZ6472	AWZ6469	AWZ6469	
	VIDEO ASSY	AWV1799	AWV1799	AWV1804	AWV1804	
	SIGNAL ASSY	AWV1800	AWV1800	AWV1805	AWV1805	
	├─ RF SWITCH	AXF1088	AXF1088	AXF1088	AXF1088	
	└─ TV FRONT END SYSTEM UNIT	AXF1084	AXF1084	AXF1084	AXF1084	
	SUB VIDEO SERVICE ASSY	AWV1819	AWV1819	Not used	Not used	
	SUB VIDEO ASSY	Not used	Not used	AWV1806	AWV1806	
	AV I/O ASSY	AWV1802	AWV1802	AWV1807	AWV1807	

■ CONTRAST OF PCB ASSEMBLIES

P POWER SUPPLY ASSY

AWV1795 and AWV1808 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		AWV1795	AWV1808	
	L105, L106	ATF1183	Not used	
	C120	ACE1125	Not used	
	CN103	AKM1156	Not used	

T LED DPO ASSY

AWZ6463 and AWZ6470 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		AWZ6463	AWZ6470	
	D5006	NSPWF50S-8038	Not used	
	Q5004	2SC2712	Not used	
	R5064, R5065	RS1/16S223J	Not used	
	R5066	RS1/10S151J	Not used	
	R5077	RS1/16S0R0J	Not used	
	R5078	Not used	RS1/16S0R0J	

R FRONT INPUT ASSY

AWZ6466 and AWZ6471 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		AWZ6466	AWZ6471	
	R5082	RS1/16S0R0J	Not used	
	R5083	Not used	RS1/16S0R0J	
	CN5042 Pin Jack (3P)	AKB1261	AKB1284	

A SIGNAL ASSY

AWV1800 and AWV1805 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		AWV1800	AWV1805	
	A 3/9			
	R2520	Not used	RS1/16S473J	
	R2521, R2638	RS1/16S473J	Not used	
	R2586–R2588, R2595, R2596, R2688	RS1/16S0R0J	Not used	
	R2689	Not used	RS1/16S0R0J	
	CN2452	KM250MA7L	Not used	

E VIDEO ASSY

AWV1799 and AWV1804 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		AWV1799	AWV1804	
	E 2/2			
	R5268	RD1/4PU133J	RD1/4PU123J	

G AUDIO ASSY

AWZ6472 and AWZ6469 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		AWZ6472	AWZ6469	
	IC1203	NJM4558MD	Not used	
	C1212	CEV470M16	Not used	
	C1213	CKSRYF103Z50	Not used	
	C1214, C1215, C1237, C1246, C1247	CEV220M16	Not used	
	C1249, C1255	CKSRYB682K50	CKSRYB562K50	
	R1208, R1209	RS1/16S101J	Not used	
	R1210, R1250	RS1/16S333J	Not used	
	R1211, R1214	RS1/16S222J	Not used	
	R1212, R1248	RS1/16S823J	Not used	
	R1213, R1215	RS1/16S623J	Not used	
	R1255, R1271	RS1/16S183J	RS1/16S223J	
	R1259	RS1/16S821J	Not used	
	R1264, R1280	RS1/16S103J	RS1/16S123J	
	R1294	RS1/16S0R0J	Not used	
	R1295	Not used	RS1/16S0R0J	

PCB PARTS LIST

For SD-582HD5 and SD-532HD5

H SUB VIDEO ASSY (AWV1806)

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC3001		AN5344FBP
	IC4301		AN5395FBP
	IC3402		CD74HCT4046AM
	IC4304		CXA1315M
	IC4802		HG62G010R29FB
	IC3407		M51952BML
	IC4052		M52036SP
	IC3404		MC14011BF
	IC3003		NJM319M
	IC2204		PD0264AM
	IC2201		PD5563
	IC2203		PST9146N
	IC3405, IC3406		SAA4955TJ
	IC3403		SAA4977H
	IC3401		SAA4990H
	IC3409		TA78M05F
	IC4806		TA8667F
	IC2205		TC74HC157AF
	IC4803		TC74HC4040AF
	IC4051		TC74HC4053AF
	IC4053, IC4055		TC74HC4066AF
	IC3414, IC4054, IC4056		TC74HC4538AF
	IC4804		TC74HCT74AF
	IC3408		TC7SET04FU
	IC3002		TK15420M
	IC3412, IC3413		UPC29L33T
	IC3410		UPC78L05T
	Q3401		2SA1037K
	Q2202, Q2204, Q2205, Q2207, Q2208		2SA1162
	Q3002, Q3003, Q3016, Q3018, Q3204		2SA1162

Mark	No.	Description	Part No.
	Q4057, Q4058, Q4062–Q4064		2SA1162
	Q4071, Q4072, Q4078, Q4081, Q4087		2SA1162
	Q4089–Q4091, Q4096, Q4301, Q4302		2SA1162
	Q4306, Q4307, Q4319, Q4328, Q4330		2SA1162
	Q2201, Q2203, Q2206, Q2209, Q2210		2SC2712
	Q3001, Q3008–Q3013, Q3015, Q3017		2SC2712
	Q3201, Q3206, Q3210, Q3211		2SC2712
	Q3215–Q3227, Q3402, Q3403		2SC2712
	Q4051–Q4056, Q4059–Q4061		2SC2712
	Q4065–Q4070, Q4075–Q4077		2SC2712
	Q4079, Q4080, Q4083–Q4086, Q4088		2SC2712
	Q4092–Q4095, Q4097, Q4098, Q4102		2SC2712
	Q4303–Q4305, Q4308–Q4311		2SC2712
	Q4321–Q4323, Q4325–Q4327		2SC2712
	Q4331, Q4332, Q4807–Q4817		2SC2712
	Q4082		2SK209
	D3001		1SS184
	D2203, D2206, D2207, D2210–D2212		1SS226
	D2215–D2234, D4056, D4057		1SS226
	D4059, D4060		1SS226
	D3402–D3411, D4052–D4054, D4058		1SS352
	D4802–D4805		1SS352
	D3401		1SV232
	D2204, D2205		RD6.8MB

COILS AND FILTERS

Mark	No.	Description	Part No.
	L2203, L4802		ATC1037
	F2201, F3201, F3202, F3402, F3403		ATF1189
	F4302, F4801–F4804		ATF1189
	F3404		ATG1061
	DL3001		ATN1040
	DL4303		ATN1055
	L4310, L4312, L4313		LCTA1R5J3225
	L3201, L3207, L3209		LCTA4R7J3225
	L2201, L3001, L4302, L4311		LCTA5R6J3225
	L4301		LCTA820J3225
	L3206		LCTAR56J3225
	L3402–L3425		QTL1013

CAPACITORS

Mark	No.	Description	Part No.
	C3019, C3220		CCSQCH100D50
	C3403, C3404, C4082, C4365–C4367		CCSQCH101J50
	C2211, C3401		CCSQCH120J50
	C2207, C2208		CCSQCH150J50
	C3407, C3410, C3468, C3469		CCSQCH151J50
	C4376		CCSQCH180J50
	C2205, C2241, C4823, C4828		CCSQCH221J50
	C4369		CCSQCH270J50
	C3257		CCSQCH330J50
	C3402		CCSQCH331J50
	C2210, C3202, C3203, C3228, C3229		CCSQCH390J50
	C3233, C3234		CCSQCH390J50
	C4310		CCSQCH470J50
	C3201, C3227, C3232		CCSQCH4R0C50
	C4302, C4347		CCSQCH560J50
	C2206, C3408, C4062, C4064		CCSQCH561J50
	C3409		CCSQCH680J50
	C3026, C3031, C4067, C4101, C4315		CEV100M16

Mark	No.	Description	Part No.
	C3435, C4348–C4350		CEV101M16
	C2222, C2226, C2237, C2239, C3020		CEV101M6R3
	C3030, C4804, C4817		CEV101M6R3
	C2234, C3014, C4099, C4377		CEV1R0M50
	C3221, C3231, C3237–C3239		CEV220M16
	C4052, C4053		CEV220M16
	C3009, C3017		CEV2R2M50
	C3005, C3006, C3023, C3028		CEV470M10
	C3255, C3256, C4051, C4054		CEV470M10
	C4056, C4057, C4059, C4068, C4078		CEV470M10
	C4080, C4345		CEV470M10
	C4065, C4092, C4093, C4802, C4832		CEV470M16
	C3204, C3207, C3414, C3416, C3418		CEV470M6R3
	C3420, C3422, C3424, C3429, C3433		CEV470M6R3
	C3458, C3461, C3463, C3464, C4075		CEV470M6R3
	C4089		CEV470M6R3
	C3406, C4081, C4094–C4097		CEV4R7M35
	C3024		CEVNP2R2M35
	C3007, C3008		CEVNPR33M50
	C4063		CEVR10M50
	C3001, C3002		CEVR33M50
	C2238, C3015		CEVR47M50
	C3012, C4303, C4311, C4319, C4359		CFHSQ103J16
	C4104		CFHSQ331J50
	C4103		CFHSQ332J16
	C4087, C4102		CFHSQ821J50
	C3471, C3472, C4055, C4355–C4358		CKSQYB224K16
	C4829		CKSQYB224K16
	C4060, C4086		CKSQYB472K50
	C4098		CKSQYB561K50
	C4830		CKSQYB822K50
	C4084		CKSQYF104Z50
	C3010, C3011, C4831, C4835		CKSQYF105Z16
	C2224, C2228, C3022, C4323, C4324		CKSRYB102K50
	C4822		CKSRYB102K50
	C2223, C3013, C3016, C3438		CKSRYF103Z50
	C4304–C4309, C4312, C4314, C4316		CKSRYF103Z50
	C4320, C4322, C4343, C4370, C4827		CKSRYF103Z50
	C2209, C2220, C2221, C2225, C2227		CKSRYF104Z16
	C2236, C3003, C3004, C3018, C3025		CKSRYF104Z16
	C3027, C3029, C3208, C3209		CKSRYF104Z16
	C3242–C3247, C3405, C3411–C3413		CKSRYF104Z16
	C3415, C3417, C3419, C3421, C3423		CKSRYF104Z16
	C3425–C3428, C3430–C3432, C3434		CKSRYF104Z16
	C3436, C3437, C3439–C3457, C3460		CKSRYF104Z16
	C3462, C3465, C3466, C3473, C4058		CKSRYF104Z16
	C4061, C4066, C4069, C4074, C4077		CKSRYF104Z16
	C4079, C4083, C4088, C4091, C4317		CKSRYF104Z16
	C4321, C4340, C4344, C4346, C4801		CKSRYF104Z16
	C4803, C4810, C4816, C4818, C4819		CKSRYF104Z16
	C4821, C4833, C4834, C4836, C4837		CKSRYF104Z16

RESISTORS

Mark	No.	Description	Part No.
	R2269, R2275		DCN1092
	R4193		RS1/16S1001F
	R4219		RS1/16S2001F
	R4871		RS1/16S3302F
	R4175, R4870		RS1/16S6802F

Mark	No.	Description	Part No.
	R3430		RS2LMF8R2J
	R3433		RS3LMF120J
	VR3003 (1 kΩ)		ACP1089
	VR4052 (2.2 kΩ)		ACP1090
	VR3004 (4.7 kΩ)		ACP1091
	Other Resistors		RS1/16S□□□J

OTHERS

	CN3002	PLUG 50–P	AKM1126
	CN3001	PLUG 44–P	AKM1155
	K3001–K3003, K3204–K3209		AKX9002
	K3401–K3415, K4301–K4304		AKX9002
	X2202	CERAMIC RESONATOR	ASS1015
	CN2202	PLUG 6–P	KM250MA6L

B AV I/O ASSY (AWV1807)

SEMICONDUCTORS

	IC6001		CXA2069Q
	Q6012, Q6022, Q6024, Q6025, Q6034		2SA1162
	Q6036–Q6038, Q6201, Q6216–Q6218		2SA1162
	Q6001, Q6002, Q6005–Q6007		2SC2712
	Q6010, Q6011, Q6021, Q6023		2SC2712
	Q6027–Q6033, Q6035, Q6039–Q6048		2SC2712
	Q6202–Q6204		2SC2712
	D6040		1SS184
	D6001–D6022, D6024, D6028, D6029		1SS226
	D6032, D6034, D6036, D6209, D6210		1SS226
	D6023, D6030, D6031, D6037–D6039		1SS352
	D6201–D6203, D6213		1SS352
	D6204		RD6.8MB
	D6214		UDZS6.2B

CAPACITORS

	C6006, C6049, C6052, C6068, C6081		CEV100M16
	C6086		CEV100M16
	C6047		CEV101M6R3
	C6074		CEV102M6R3
	C6013, C6014, C6026, C6027		CEV1R0M50
	C6031, C6032, C6036, C6037		CEV1R0M50
	C6041–C6043, C6065, C6066, C6078		CEV1R0M50
	C6015–C6017, C6024, C6028, C6029		CEV220M16
	C6033, C6034, C6051, C6064, C6070		CEV220M16
	C6083, C6088		CEV220M16
	C6001, C6004, C6018, C6020		CEV470M16
	C6059, C6060, C6085, C6214, C6216		CEV470M16
	C6204		CEV470M6R3
	C6007, C6050, C6053, C6069, C6082		CEV4R7M35
	C6087		CEV4R7M35
	C6067, C6077		CEVR47M50
	C6002, C6003, C6011, C6012		CKSQYF105Z16
	C6202		CKSQYF472Z50
	C6075, C6076		CKSRYB332K50
	C6005, C6008, C6021–C6023		CKSRYF103Z50
	C6038–C6040, C6048, C6054–C6058		CKSRYF103Z50
	C6063, C6071, C6084, C6089, C6201		CKSRYF103Z50
	C6203, C6215		CKSRYF103Z50
	C6019, C6025, C6030, C6035		CKSRYF104Z16

Mark	No.	Description	Part No.

RESISTORS

	R6183		RD1/2LMF1R0J
	R6182		RD1/4LMF3R9J
	R6279–R6281, R6297		RS1/16S0R0J
	R6106, R6123, R6126, R6136, R6144		RS1/16S101J
	R6147, R6207, R6213, R6269		RS1/16S101J
	R6271–R6273		RS1/16S101J
	R6040, R6118, R6130, R6143, R6154		RS1/16S102J
	R6163, R6174, R6201, R6205, R6277		RS1/16S102J
	R6005, R6105, R6116, R6120, R6152		RS1/16S103J
	R6156, R6161, R6165, R6172, R6176		RS1/16S103J
	R6202, R6209, R6268, R6270		RS1/16S103J
	R6004, R6006, R6036, R6114, R6127		RS1/16S104J
	R6150, R6159, R6170		RS1/16S104J
	R6054, R6125		RS1/16S152J
	R6104, R6276		RS1/16S153J
	R6137, R6139		RS1/16S183J
	R6011, R6013, R6020–R6026		RS1/16S221J
	R6029–R6033, R6037, R6052, R6053		RS1/16S221J
	R6067, R6074, R6085, R6086, R6115		RS1/16S221J
	R6124, R6138, R6140–R6142, R6145		RS1/16S221J
	R6151, R6160, R6171		RS1/16S221J
	R6009, R6010, R6041, R6075–R6080		RS1/16S222J
	R6112, R6113, R6131, R6146		RS1/16S222J
	R6121, R6122, R6132–R6135		RS1/16S223J
	R6157, R6158, R6166, R6167		RS1/16S223J
	R6177, R6178, R6204, R6206		RS1/16S223J
	R6210–R6212		RS1/16S223J
	R6203		RS1/16S224J
	R6059, R6068, R6208		RS1/16S332J
	R6119, R6155, R6164, R6175		RS1/16S472J
	R6184, R6185, R6274		RS1/16S472J
	R6001, R6002, R6062, R6063		RS1/16S474J
	R6069, R6070, R6179, R6180		RS1/16S474J
	R6102, R6103		RS1/16S560J
	R6039, R6117, R6129, R6153, R6162		RS1/16S562J
	R6173		RS1/16S562J
	R6012, R6014–R6017, R6019		RS1/16S622J
	R6027, R6028, R6081–R6084		RS1/16S622J
	R6110, R6111		RS1/16S622J
	R6038, R6128		RS1/16S682J
	R6055, R6057		RS1/16S683J
	R6018, R6060, R6061, R6064–R6066		RS1/16S750J
	R6071–R6073, R6181, R6186–R6188		RS1/16S750J
	R6215–R6220		RS1/16S750J
	R6148, R6149, R6194		RS1/16S821J
	R6056, R6058		RS1/16S823J
	R6193		RS1/16S911J
	Other Resistors		RS1/10S□□□J

OTHERS

	CN6001	PIN JACK (6P) WITH SIN	AKB1285
	CN6002	PIN JACK (6P) WITH SIN	AKB1286
	CN6203	PIN JACK (6P)	AKB1287
	CN6205	PLUG 50–P	AKM1126
	JA6201, JA6206	JACK	AKN1071
	CN6006	L–PLUG (10P)	KM250MA10L
	CN6202	PLUG 3–P	KM250MA3LB
	CN6204	PLUG 3–P	KM250MA3LR

For PRO-610HD and PRO-510HD

P POWER SUPPLY ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC101		AN8029
	IC204		MC33167TV
	IC901		MIP0253SP
	IC203		NJM79M05FA
	IC102, IC902, IC903		ON3171
	IC103		PC817CD
	IC201, IC202		PQ30RV11 (A)
	Q206, Q207, Q210, Q906		2SA933S
	Q205, Q901–Q905, Q907		2SC1740S
	Q202		2SC2705
	Q201		2SD1276A
⚠	Q101		2SK1544
	D102, D206, D207		10DF2
	D210–D213, D215–D219		1SS254
	D223, D224, D226, D227		1SS254
	D229, D230, D908, D910–D914		1SS254
	D915		BR3371XJ30A
	D101		D15XB60H
	D906, D907		D1NS4
	D201		D3L60
	D905		ERB06–15
	D909		HZS2BLL
	D228		HZS4BLL
	D209		HZS6A1L
	D222		HZS6B1L
	D214		HZS6C2L
	D105, D110		MA723
	D103		MTZJ24
	D104		MTZJ27B
	D111		RD12ESB
	D106–D109		RD5.1ESB
	D901		S1WB (A) 60B
	D208		SF5SC3L
	D204		YG802C06R
	D202, D203, D205		YG911S2R

COILS AND FILTERS

Mark	No.	Description	Part No.
	L103–L106		ATF1183
	L201, L202, L214, L217, L218		ATH–059
	L215, L216		ATH1046
	L213		ATH1102
	L902		ATX1008
	L101, L102		ATX1021
	L901		LAU2R2J

TRANSFORMERS

Mark	No.	Description	Part No.
	T901		ATK1133
	T101		ATK1135

SWITCHES AND RELAYS

Mark	No.	Description	Part No.
	RY101, RY102		ASR1049

CAPACITORS

Mark	No.	Description	Part No.
	C113, C114, C242, C243		ACE1105
	C115, C120–C122		ACE1125
	C906		ACE1138
	C905		ACE1144
	C210 (100 pF)		ACG–032
	C116, C117, C914, C915		ACG–501
	C125 (3300 pF)		ACG1008
	C111, C112, C126 (4700 pF)		ACG1028
	C201		ACH1146
	C101, C102		ACH1148
	C205		ACH1304
	C215, C216		CCCSL101K2H
	C211–C214		CCCSL221K2H
	C209		CEHAT100M2A
	C208, C220, C234, C236, C241		CEHAT100M50
	C912		CEHAT100M50
	C107, C222, C229		CEHAT101M25
	C226		CEHAT102M16
	C108, C231, C909		CEHAT1R0M50
	C110		CEHAT220M50
	C202		CEHAT222M50
	C908		CEHAT331M10
	C245, C907		CEHAT331M16
	C203, C204, C207		CEHAT332M35
	C235, C910, C911, C913		CEHAT470M25
	C901		CEHAT470M2D
	C247		CEHAT472M10
	C218, C246, C902		CFTXA104J50
	C251		CFTXA563J50
	C103		CKCYB561K50
	C217		CKCYE103P2H
	C109, C219, C223, C224		CKCYF103Z50
	C227, C228, C230, C237, C238		CKCYF103Z50
	C244		CKCYF473Z50
	C232, C916		CQMA104J50
	C104		CQMA182J50
	C106		CQMA473J50
	C105		CQMA822J50

RESISTORS

Mark	No.	Description	Part No.
	R102, R901		ACN1128
	R120, R123 (2.2 MΩ)		BCN1022
	R106		RD1/2MMF100J
	R903		RD1/4MUF103J
	R112		RD1/4MUF681J
	R906		RN1/4PC1501F
	R207		RN1/4PC1502F
	R216		RN1/4PC1503F
	R212, R213		RN1/4PC1603F
	R208, R907		RN1/4PC1801F
	R209		RN1/4PC2701F
	R204		RN1/4PC2702F
	R205, R206		RN1/4PC3301F
	R214		RN1/4PC3901F
	R217		RN1/4PC6801F

Mark	No.	Description	Part No.
	R117		RS1MMF151J
	R104, R105		RS1MMF333J
	R103		RS1MMF473J
	R210		RS2MMF223J
	R219, R249		RS2MMF3R3J
	R201		RS2MMF472J
	R246, R251		RS2MMF821J
	R109–R111		RS2MMFR22J
	R252		RS3LMF4R7J
	R121, R122, R218, R247		RT10PZ120K
	R101		RT5PZ1R8K
	R248		RT7PZ120K
	VR201, VR901		VRTHS6VS102
	Other Resistors		RD1/4PU☐☐☐J

OTHERS

Mark	No.	Description	Part No.
	8008	SCREW	ABZ30P100FMC
	8001	SPACER	AEB1243
⚠	FU101	FUSE (10A)	AEK1069
	CN901	PLUG 2–P	AKM1127
	CN101, CN103	PLUG2–P	AKM1156
	H201–H208		AKR1003
	H101, H102	FUSE HOLDER	AKR1007
	8004	SCREW	BBZ30P080FCU
	8009	SCREW	BBZ30P080FZK
	CN205	PLUG 10–P	KM250MA10
	CN207	PLUG 12–P	KM250MA12
	CN212	PLUG 3–P	KM250MA3
	CN206	PLUG 4–P	KM250MA4
	CN204	PLUG 6–P	KM250MA6
	8000	SCREW	PBZ30P100FMC
	8010	SCREW	PMB30P100FMC
	8003	SCREW	PMZ30P100FZK
⚠	FU201	FUSE (4A)	REK1082
⚠	FU204	FUSE (5A)	REK1083
⚠	FU202, FU203	FUSE (6.3A)	REK1085

L DEFLECTION SERVICE ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC303, IC601		NJM4558DXP
⚠	IC301		TA8638N
	Q315, Q316, Q604, Q605, Q804		2SA1145
	Q806		2SA1145
	Q808		2SA1837
	Q302, Q306, Q311, Q313, Q319		2SA933S
	Q321, Q322, Q326		2SA933S
×	Q607, Q608		2SA933S
	Q751, Q801		2SA933S
	Q301, Q304, Q305, Q307, Q310		2SC1740S
	Q312, Q318, Q320, Q327, Q602		2SC1740S
	Q614, Q752, Q802		2SC1740S
	Q314, Q317, Q603, Q606, Q803		2SC2705
	Q805, Q807		2SC2705
	Q308, Q601		2SC3332
	Q609		2SC3468
⚠	Q753, Q754		2SC4686A
	Q809		2SC4793
⚠	Q612		2SC5043
⚠	Q309		2SC5046
	Q324, Q613		2SC5197
	Q610		2SD1276A
	D302, D304, D601		10DF2
	D305–D314, D322, D603		1SS254
	D608, D609, D611, D614, D615		1SS254
	D621, D625, D751–D757		1SS254
⚠	D622, D623		2NU41
	D321		BR3371XJ30A
⚠	D318		DD52RC
	D328, D329, D343, D610		ERA22–02
	D613		ERB06–15
	D303, D602		ERB93–02L3
⚠	D316, D317		ERD07–15
	D801, D802		MTZJ39
	D315, D327, D604–D607		RD12ESB
	D344, D624		RD5.1ESB1
	D612		RD7.5ESB2
	D627		RD9.1ESB1
	D803–D806		S5688G

COILS AND FILTERS

Mark	No.	Description	Part No.
	SG751		AEX1024
	L307, L308		ATH–059
⚠	T301		ATK1126
⚠	T302, T602		ATK1127
⚠ ×	T601		ATK1136
	L303–L306, L309, L601–L603		ATX1008
	L310, L605		LTA152J

CAPACITORS

Mark	No.	Description	Part No.
⚠	C325 (100 pF)		ACG–032
	C754, C755 (4700 pF)		ACG1028
	C636		ACH–372
⚠	C324, C604 (10 µF/160V)		ACH1117
	C331, C335, C358, C606, C802		CCCSL101J50
	C336, C612		CCCSL101K2H
	C820–C822		CCCSL220J50
	C815		CCCSL221J50
	C326, C342		CCCSL470J50
	C304		CEANP2R2M50
	C806, C807		CEAT101M25
	C817		CEAT470M50
	C334		CEHAQ1R0M2C
	C353, C616		CEHAT100M2D
	C619, C621, C752		CEHAT100M50
	C308, C337, C349, C355, C608		CEHAT101M25
	C330, C605		CEHAT101M50
	C359		CEHAT102M35
	C357, C633		CEHAT1R0M50
	C620, C809, C818		CEHAT220M2D
	C635		CEHAT220M50
	C618		CEHAT220M63
	C328, C624, C625		CEHAT221M25
	C332, C613		CEHAT330M35
	C313		CEHAT331M16

Mark	No.	Description	Part No.
	C810		CEHAT3R3M2C
	C623, C751		CEHAT470M25
	C351, C352, C360, C361		CEHAT471M16
	C634		CEHAT4R7M2E
	C309, C341, C343		CEHAT4R7M50
⚠	C601, C602		CFPHW182H3D
⚠	C320		CFPHW332H3D
⚠	C321		CFPHW472H3D
⚠	C319, C322		CFPMW334J2G
	C323, C603		CFTXA105J50
	C312		CFTXA224J50
	C329		CFTXA683J50
	C311		CKCYB102K50
	C303		CKCYB103K50
	C607		CKCYB222K50
	C628		CKCYB332K2H
	C327, C611		CKCYB561K50
	C627		CKCYB682K50
	C637, C814, C819		CKCYE103P2H
	C615		CKCYE222P2H
	C315–C318, C333, C338–C340		CKCYF103Z50
	C350, C356, C609, C610, C614		CKCYF103Z50
	C617, C622, C626, C629, C753		CKCYF103Z50
	C801, C803, C808		CKCYF103Z50
	C804, C805, C816		CKCYF473Z50
	C813		CQMA104K2E
	C307		CQMA471J50
	C811, C812		CQMA472K2E
	C302		CQMA561J50
	C305		CQMA682J50
	C301		CQPA102J2A
	C314		CQPA333J2A
	C306		CQPA821J2A

RESISTORS

Mark	No.	Description	Part No.
	R769		ACN1011
	R661 (27 Ω)		ACN1136
	R826		RD1/2MMF100J
	R815		RD1/2MMF332J
	R770, R772–R776		RD1/2PM114J
	R631		RD1/2PM122J
	R365		RD1/2PM153J
	R648		RD1/2PM154J
	R771, R777–R781		RD1/2PM184J
	R366, R618, R649		RD1/2PM223J
	R757–R768		RD1/2PM224J
	R813, R814		RD1/2PM270J
	R801		RD1/2PM272J
	R823, R824		RD1/2PM2R2J
	R628		RD1/2PM333J
	R617		RD1/2PM563J
⚠	R395, R634		RD1/4LMF100J
	R635		RD1/4MUF100J
	R827, R828		RD1/4MUF560J
⚠	R629, R630		RN1/2PC3902F
	R328		RN1/4PC1002F
	R646, R650		RN1/4PC1003F
×	R645		RN1/4PC1003F
	R419		RN1/4PC1202F
×	R639		RN1/4PC1202F
	R318		RN1/4PC1203F
	R302		RN1/4PC1303F
	R372		RN1/4PC1503F
	R753		RN1/4PC2202F
	R327		RN1/4PC2702F
	R752		RN1/4PC3302F
	R783		RN1/4PC3601F
	R755		RN1/4PC4701F
	R754		RN1/4PC56R0F
	R373, R421		RN1/4PC6801F
×	R640		RN1/4PC6801F
	R782		RN1/4PC7501F
×	R644		RN1/4PC7502F
	R301, R647		RN1/4PC8201F
	R338, R604		RS1MMF100J
	R809, R810		RS1MMF472J
	R658, R659		RS2MMF101J
	R336, R337, R339, R602, R603		RS2MMF1R0J
	R621, R622		RS2MMF1R8J
	R333, R601		RS2MMF222J
	R819–R821		RS2MMF271J
	R358, R359		RS2MMF2R2J
	R355		RS2MMF390J
	R660		RS2MMFR56J
	R822, R825, R831		RS3LMF471J
⚠	R392		RT5PZ561K
×	VR601		VRTHS6VS102
	VR301		VRTHS6VS222
×	VR602		VRTHS6VS223
	VR603		VRTHS6VS223
	VR302		VRTHS6VS473
×	R637, R638		RD1/4PU102J
×	R642		RD1/4PU821J
×	R643		RD1/4PU822J
	Other Resistors		RD1/4PU □□□ J

OTHERS

Mark	No.	Description	Part No.
	J602	H.V.RETURN WIRE	ADX2486
	J601	1P READ WIRE	ADX2492
	J603	HV CABLE (400)	ADY1043
	301, 309, 601	ISOLATION SHEET	AEB1358
	602	NYLON BINDER	AEC–093
⚠	CN301–CN303	PLUG 3–P	AKM1055
	CN751	PLUG 3–P	AKM1055
	305, 607	SCREW	BBZ30P080FCU
	CN304	PLUG 12–P	KM250MA12
	CN305	PLUG 12–P	KM250MA13
	CN309	PLUG 4–P	KM250MA4
	CN307	PLUG 5–P	KM250MA5
	CN308	PLUG 6–P	KM250MA6
	CN306	PLUG 6–P	KM250MA6R
	CN801	PLUG 9–P	KM250MA9
	304, 605	SCREW	PMB30P160FZK
	306, 604, 606, 752, 802	SCREW	PMZ30P100FZK
	608	SCREW	VPZ40P120FMC

K CONV. AMP ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC1002		CA0007AD
	IC1004, IC1005		M5220P
	IC1003		PA0053B
	IC901, IC903		STK392–110
	IC1001		TC4052BP
	Q902, Q905, Q908, Q909, Q917		2SA933S
	Q914		2SB950A
	Q901, Q903, Q906, Q907		2SC1740S
	Q910–Q912, Q915, Q916		2SC1740S
	Q904, Q918		2SC2878
	Q913		2SD1276A
	D1014, D1015, D907–D911		1SS254
	D921, D922, D924		1SS254
	D923		BR3371XJ30A
	D1001–D1013		RD12ESB
	D901–D906, D915–D920		S5688G

COILS AND FILTERS

Mark	No.	Description	Part No.
	L901, L902		ATH–059
	L903, L904		ATX1008

CAPACITORS

Mark	No.	Description	Part No.
	C1001, C1022, C1023, C1025, C1041		CCCSL101J50
	C909, C911, C912		CCCSL151J50
	C917–C919, C934–C936		CCCSL220J50
	C905		CEANP101M25
	C953		CEAT100M50
	C1013–C1017, C1019, C1029, C1030		CEAT101M10
	C1035		CEAT101M10
	C906		CEAT101M25
	C1039		CEAT220M50
	C1036, C1037		CEAT330M16
	C1038		CEAT470M10
	C1004, C945		CEAT470M25
	C921, C922, C938, C939		CEHAT102M25
	C920, C923, C937		CEHAT102M35
	C952		CEHAT221M25
	C908		CEHAT221M35
	C949		CEHAT332M25
	C948		CEHAT332M35
	C940		CEHAT471M35
	C1040		CFTYA184J50
	C1028, C1034		CFTYA224J50
	C910, C913, C950		CKCYB102K50
	C924–C926, C941–C943		CKCYB331K50
	C914–C916, C931–C933		CKCYB681K50
	C1002, C1003, C1005–C1012, C1018		CKCYF103Z50
	C1020, C1021, C1026, C1027		CKCYF103Z50
	C1031–C1033, C901–C904, C907		CKCYF103Z50
	C927–C930, C944, C946, C947		CKCYF103Z50
	C951, C954–C957		CKCYF103Z50

RESISTORS

Mark	No.	Description	Part No.
	R933, R955		RD1/2MMF470J
	R934, R940–R942, R956		RS1MMF470J
	R922		RS1MMF562J
	R935, R936, R957, R958		RS1MMFR47J
	R927–R929, R978–R980		RS2MMF121J
	R985		RS2MMF1R2J
	R960, R961		RS2MMF1R5J
	R930, R931, R981–R983		RS2MMF221J
	R976, R977		RS2MMF2R2J
	R914, R988		RS2MMFR47J
	R937, R938, R959		RS3LMF1R5J
	R932		RS3LMF221J
	R998		RS3LMFR68J
	R939		RS3LMFR82J
	Other Resistors		RD1/4PU☐☐☐J

OTHERS

Mark	No.	Description	Part No.
	903	SCREW	BBZ30P080FCU
	CN905	PLUG 10–P	KM200IA10
	CN904	16P PLUG	KM200IA16
	CN901	PLUG 6–P	KM250MA6
	CN903	PLUG 6–P	KM250MA6B
	CN902	PLUG 6–P	KM250MA6R
	901	SCREW	PMB30P160FZK
	902	SCREW	PMZ30P100FZK

M R CRT DRIVE ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC5101		TDA6120Q
	Q5101		2SC1740S
	D5101–D5106		S5688G

COILS AND FILTERS

Mark	No.	Description	Part No.
	SG5101, SG5102		AEX1024
	L5102		LAU2R2J
	L5101		LAU3R3J
	L5103		LTA562J

CAPACITORS

Mark	No.	Description	Part No.
	C5108 (1000 pF)		ACG1001
	C5107, C5114 (22 µF/250V)		ACH1318
	C5103		CCCSL120J50
	C5101		CCCSL390J50
	C5102		CCCSL7R0D50
	C5110		CEAT101M25
	C5109		CEAT222M16
	C5111, C5113		CKCYE103P2H
	C5104, C5106		CKCYF103Z50

RESISTORS

Mark	No.	Description	Part No.
	R5115 (47 Ω)		ACN1129
	R5116 (220 Ω)		ACN1131
	R5118 (470 Ω)		ACN1133
	R5117		RD1/2LMF100J
	R5101		RS1MMF6R8J

Mark	No.	Description	Part No.
	R5112–R5114		RS3LMF822J
	VR5101		VRTHS6VS222
	Other Resistors		RD1/4PU □□□ J

OTHERS

Mark	No.	Description	Part No.
	5104	CRT SOCKET	AKG1006
	5107, 5108	SCREW	BBZ30P080FCU
	5103–5106	SCREW	BPZ30P100FZK
	CN5105	PLUG 3–P	KM250MA3
	CN5106	PLUG 3–P	KM250MA3R
	CN5102	PLUG 5–P	KM250MA5B
	CN5101	PLUG 5–P	KM250MA5R
	5101, 5102	SCREW	PMB30P160FZK

N G CRT DRIVE ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC5151		TDA6120Q
	Q5151		2SC1740S
	D5151–D5156		S5688G

COILS AND FILTERS

Mark	No.	Description	Part No.
	SG5151, SG5152		AEX1024
	L5152		LAU2R2J
	L5151		LAU3R3J
	L5153		LTA562J

CAPACITORS

Mark	No.	Description	Part No.
	C5158 (1000 pF)		ACG1001
	C5157, C5164 (22 μF/250V)		ACH1318
	C5153		CCCSL120J50
	C5151		CCCSL560J50
	C5152		CCCSL7R0D50
	C5160		CEAT101M25
	C5159		CEAT222M16
	C5161, C5163		CKCYE103P2H
	C5154, C5156, C5165		CKCYF103Z50

RESISTORS

Mark	No.	Description	Part No.
	R5164 (47 Ω)		ACN1129
	R5165 (220 Ω)		ACN1131
	R5168 (470 Ω)		ACN1133
	R5167		RD1/2LMF100J
	R5151		RS1MMF6R8J
	R5161–R5163		RS3LMF822J
	VR5151		VRTHS6VS222
	Other Resistors		RD1/4PU □□□ J

OTHERS

Mark	No.	Description	Part No.
	J5152	LEAD WITH HOUSING	ADX2493
	5154	CRT SOCKET	AKG1006
	5157, 5158	SCREW	BBZ30P080FCU
	5153–5156	SCREW	BPZ30P100FZK
	CN5156	PLUG 3–P	KM250MA3
	CN5157	PLUG 3–P	KM250MA3B
	CN5151	PLUG 5–P	KM250MA5
	5151, 5152	SCREW	PMB30P160FZK

O B CRT DRIVE ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC5201		TDA6120Q
	Q5201		2SC1740S
	D5201–D5206		S5688G

COILS AND FILTERS

Mark	No.	Description	Part No.
	SG5201, SG5202		AEX1024
	L5202		LAU1R0J
	L5201		LAU4R7J
	L5203		LTA562J

CAPACITORS

Mark	No.	Description	Part No.
	C5208 (1000 pF)		ACG1001
	C5207, C5214 (22 μF/250V)		ACH1318
	C5201–C5203		CCCSL220J50
	C5210		CEAT101M25
	C5209		CEAT222M16
	C5211, C5213		CKCYE103P2H
	C5204, C5206		CKCYF103Z50

RESISTORS

Mark	No.	Description	Part No.
	R5214 (47 Ω)		ACN1129
	R5215 (220 Ω)		ACN1131
	R5218 (470 Ω)		ACN1133
	R5217		RD1/2LMF100J
	R5201		RS1MMF6R8J
	R5211–R5213		RS3LMF822J
	VR5201		VRTHS6VS222
	Other Resistors		RD1/4PU □□□ J

OTHERS

Mark	No.	Description	Part No.
	J5203	LEAD WITH HOUSING	ADX2493
	5204	CRT SOCKET	AKG1006
	5207, 5208	SCREW	BBZ30P080FCU
	5203–5206	SCREW	BPZ30P100FZK
	CN5206	PLUG 3–P	KM250MA3
	CN5207	PLUG 3–P	KM250MA3B
	CN5201	PLUG 5–P	KM250MA5B
	5201, 5202	SCREW	PMB30P160FZK

I DIGITAL CONV. ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC1656		24LC08B (I) P
	IC1410		24LC128 (I) P
	IC1401		CM0006CF
	IC1420		M51952BML
	IC1655		MC14066BF
	IC1411, IC1419		NJM4558MD
	IC1652		PD5564
	IC1653		PST9146N
	IC1409		TC74HC14AF
	IC1654		TC74HC157AF
	IC1421		TC74HC4053AF
	IC1651		TC74HC4538AF
	IC1402		TLC2932IPW

Mark	No.	Description	Part No.
	IC1412–IC1418		UPC4570G2
	IC1403–IC1408		UPD6376GS
	Q1401, Q1651		2SC2712
	Q1403, Q1652		2SJ461
	D1409		1SS181
	D1677		1SS184
	D1401–D1407, D1651, D1654–D1657		1SS226
	D1661–D1665, D1667–D1670		1SS226
	D1673–D1676		1SS226
	D1652, D1666		RD6.8MB

COILS AND FILTERS

Mark	No.	Description	Part No.
	L1651		ATC1037
	F1401–F1403		ATF1189
	L1402		ATH1046
	L1401, L1403, L1405, L1407, L1409 (470 µH)		ATH1097
	L1411, L1413 (470 µH)		ATH1097
	L1415–L1420, L1424, L1425		QTL1013
	L1428, L1429, L1432, L1433		QTL1013
	L1436, L1437		QTL1013

CAPACITORS

Mark	No.	Description	Part No.
	C1401, C1405, C1421, C1425, C1426		CCSQCH100D50
	C1430, C1431, C1435, C1436		CCSQCH100D50
	C1440, C1441, C1445, C1446, C1450		CCSQCH100D50
	C1540, C1542, C1544, C1546		CCSQCH101J50
	C1659, C1660		CCSQCH150J50
	C1434		CCSQCH181J50
	C1671		CCSQCH221J50
	C1451		CCSQCH471J50
	C1539		CCSQSL220J50
	C1551		CEAT102M6R3
	C1655		CEV101M6R3
	C1672		CEV1R0M50
	C1415		CEV2R2M50
	C1406, C1408, C1411, C1413, C1429		CEV470M6R3
	C1458, C1461, C1467, C1470, C1473		CEV470M6R3
	C1475, C1483, C1485, C1497, C1498		CEV470M6R3
	C1500, C1505, C1506, C1508		CEV470M6R3
	C1510, C1511, C1515, C1516, C1518		CEV470M6R3
	C1520, C1521, C1525, C1526, C1530		CEV470M6R3
	C1532, C1535, C1536, C1538, C1541		CEV470M6R3
	C1543, C1545, C1548, C1652, C1661		CEV470M6R3
	C1665, C1669		CEV470M6R3
	C1453		CEVNP4R7M16
	C1456		CEVR22M50
	C1454		CFHSQ103J16
	C1402, C1422, C1427, C1432, C1437		CFHSQ471J50
	C1442, C1447		CFHSQ471J50
	C1403, C1423, C1428, C1433, C1438		CFHSQ472J16
	C1443, C1448		CFHSQ472J16
	C1654, C1673		CFHSQ561J50
	C1452		CFHSQ821J50
	C1680		CKCYF103Z50
	C1658, C1663, C1664		CKSRYB102K50
	C1667		CKSRYB561K50
	C1404, C1407, C1409, C1410, C1412		CKSRYF103Z50
	C1414, C1416–C1418, C1420, C1424		CKSRYF103Z50
	C1455, C1457, C1459, C1460, C1463		CKSRYF103Z50
	C1465, C1466, C1468, C1469		CKSRYF103Z50
	C1471, C1472, C1474, C1476		CKSRYF103Z50
	C1478, C1479, C1481, C1482, C1484		CKSRYF103Z50
	C1486, C1488, C1489, C1491, C1492		CKSRYF103Z50
	C1494, C1496, C1499, C1501, C1502		CKSRYF103Z50
	C1504, C1507, C1509, C1512, C1514		CKSRYF103Z50
	C1517, C1519, C1522, C1524		CKSRYF103Z50
	C1527, C1528, C1534, C1537		CKSRYF103Z50
	C1549, C1550, C1651, C1653		CKSRYF103Z50
	C1656, C1657, C1662, C1666, C1670		CKSRYF103Z50
	C1668		CKSRYF104Z16

RESISTORS

Mark	No.	Description	Part No.
	R1731		RD1/4LMF2R7J
	R1404, R1412, R1416, R1419, R1424		RS1/16S1002F
	R1428, R1431, R1436, R1440		RS1/16S1002F
	R1454–R1456		RS1/16S1002F
	R1520, R1522, R1524, R1526, R1528		RS1/16S2402F
	R1530		RS1/16S2402F
	R1655		RS1/16S3901F
	R1401, R1514–R1518		RS1/16S4302F
	Other Resistors		RS1/16S☐☐☐J

OTHERS

Mark	No.	Description	Part No.
	202, 203	CABLE HOLDER	AKT1011
	X1651	CERAMIC RESONATOR	ASS1015
	CN1655	CONNECTOR	B12B–PH–SM3
	CN1654	CONNECTOR	B8B–PH–SM3
	CN1651	PLUG 10–P	KM250MA10
	CN1652	PLUG 6–P	KM250MA6
	CN1653	PLUG 7–P	KM250MA7

J CONNECTOR ASSY

OTHERS

Mark	No.	Description	Part No.
	1801, 1802	CABLE HOLDER	AKT1011
	J1801, J1802	JUMPER WIRE	D15A13–100–
2651			
	CN1803	10P SOCKET	KP200IA10L
	CN1804	16P SOCKET	KP200IA16L

S FRONT CONTROL ASSY

SWITCHES AND RELAYS

Mark	No.	Description	Part No.
	S5001–S5008		ASG1034

CAPACITORS

Mark	No.	Description	Part No.
	C5003		CEV101M6R3
	C5004, C5005		CKSRYF103Z50

RESISTORS

Mark	No.	Description	Part No.
	R5014		RS1/16S101J
	R5012, R5019		RS1/16S102J
	R5015		RS1/16S181J
	R5018		RS1/16S222J
	R5016		RS1/16S301J

Mark	No.	Description	Part No.
	R5013		RS1/16S470J
	R5017		RS1/16S561J
	R5020		RS1/16S622J

OTHERS

	J5001	7P HOUSING WIRE	ADX2500
	CN5001	PLUG 8–P	KM250MA8

T LED DPO ASSY

SEMICONDUCTORS

	Q5001, Q5005		2SA1162
	Q5002, Q5004		2SC2712
	D5002		1SS181
	D5007		AEL1177
	D5006		NSPWF50S–8038
	D5008		SLR–56PC (LMN)
	PC5001		P1241–09

CAPACITORS

	C5001		CEV100M16
	C5002		CEV330M25

RESISTORS

	R5001		RD1/2LMF820J
	R5072, R5073, R5077		RS1/16S0R0J
	R5011		RS1/16S102J
	R5035, R5036		RS1/16S103J
	R5005		RS1/16S152J
	R5064, R5065		RS1/16S223J
	R5007		RS1/16S273J
	R5010		RS1/16S334J
	R5002, R5003		RS1/16S473J
	R5008		RS1/16S562J
	R5004		RS1/2S821J
	VR5001		VRTS6VS473
	Other Resistors		RS1/10S □□□ J

OTHERS

	5001	DPO HOLDER	AMR2294

C BNC ASSY

OTHERS

	J5025	3P HOUSING WIRE	ADX2494
	CN5022	CONNECTOR	AKX1002
	5021	SCREW TERMINAL	VNE1949

D SR ASSY

CAPACITORS

	C5072		CCSQCH121J50
	C5071		CEV101M6R3

Mark	No.	Description	Part No.

RESISTORS

	R5080		RS1/16S0R0J
	R5071		RS1/16S102J

OTHERS

	CN5071	PLUG 3–P	KM250MA3B
		REMOTE RECEIVER UNIT	GP1U28X

R FRONT INPUT ASSY

SEMICONDUCTORS

	Q5041, Q5042		2SC2712
	D5041, D5042		RD15MB

CAPACITORS

	C5043, C5044		CEV1R0M50
	C5041		CEV470M16
	C5042, C5045		CKSRYF103Z50

RESISTORS

	R5043		RD1/4LMF101J
	R5082		RS1/16S0R0J
	R5054, R5055		RS1/16S222J
	R5046, R5049–R5051		RS1/16S473J
	R5047, R5048		RS1/16S474J
	R5041, R5044, R5045		RS1/16S750J
	Other Resistors		RS1/10S □□□ J

OTHERS

	CN5042	PIN JACK (3P) WITH SIN	AKB1261
	CN5041	PLUG 12–P	KM250MA13

Q POWER SW ASSY

SWITCHES AND RELAYS

	S5081		ASG1084

OTHERS

	CN5081	PLUG 2–P	AKM1127

F RGB SW ASSY

SWITCHES AND RELAYS

	S5091		ASH1029

RESISTORS

	R5096		RS1/16S101J
	R5091–R5095		RS1/16S750J

OTHERS

	CN5092	15PD–SUB SOCKET	AKP1195
	CN5091	8P PLUG	KM250NA8L

G AUDIO ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC1202		LA4280–P
	IC1203–IC1205		NJM4558MD
	IC1201		UPC1853CT–01
	Q1206		2SA1162
	Q1201–Q1203, Q1207, Q1210–Q1213		2SC2712
	Q1208, Q1209		2SC4213
	D1205		1SS226

CAPACITORS

Mark	No.	Description	Part No.
	C1239 (470 µF/10V)		ACH1334
	C1242, C1243		CCSQCH151J50
	C1245		CEHAT102M50
	C1228, C1229		CEHV2R2M50
	C1204		CEV1R0M50
	C1205, C1214, C1215, C1237		CEV220M16
	C1246, C1247		CEV220M16
	C1234		CEV221M35
	C1202, C1203		CEV2R2M50
	C1235, C1236		CEV330M25
	C1206, C1207		CEV3R3M50
	C1208, C1212, C1263, C1267		CEV470M16
	C1240, C1241		CEVR47M50
	C1218, C1221		CFHS223J16
	C1210, C1211, C1244		CFHSP104J16
	C1201		CFHSP823J16
	C1219		CFHSQ102J50
	C1217		CFHSQ222J50
	C1223		CFHSQ681J50
	C1220, C1222		CFHSQ682J16
	C1216, C1230, C1231, C1233		CFTYA104J50
	C1250, C1256		CKSQYB183K50
	C1264, C1265		CKSRYB102K50
	C1248, C1254		CKSRYB152K50
	C1251, C1257		CKSRYB332K50
	C1249, C1255		CKSRYB682K50
	C1209, C1213, C1226, C1227, C1232		CKSRYF103Z50
	C1262, C1266		CKSRYF103Z50

RESISTORS

Mark	No.	Description	Part No.
	R1245		RS1/2S561J
	R1228, R1229		RD1/4LMF2R2J
	R1291		RD1/4LMF3R9J
	Other Resistors		RS1/16S □□□ J

OTHERS

Mark	No.	Description	Part No.
	1201	ISOLATION SHEET	AEB1359
	1202	PLATE SPRING	ANG1569
	1201	SCREW	BBZ30P080FCU
	CN1201	11P SOCKET	KP200IA11L
	CN1202	12P SOCKET	KP200IA12L

E VIDEO ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC5254		CXA1315P
	IC5602		PQ30RV11 (A)
	IC5601		PQ3RF23
	IC5251		TA1276AN
	IC5256		TC74HC4053AP
	IC5252		TC74HC4538AP
	Q5251–Q5255, Q5260–Q5264, Q5266		2SA933S
	Q5268, Q5270, Q5276, Q5277		2SA933S
	Q5285–Q5287, Q5290, Q5301		2SA933S
	Q5305, Q5306, Q5318, Q5323		2SA933S
	Q5331–Q5333, Q5341, Q5601, Q5602		2SA933S
	Q5606–Q5608, Q5611, Q5621, Q5622		2SA933S
	Q5257, Q5259, Q5265, Q5272–Q5275		2SC1740S
	Q5278–Q5281, Q5288, Q5289, Q5302		2SC1740S
	Q5307–Q5310, Q5319, Q5320		2SC1740S
	Q5328–Q5330, Q5340, Q5342		2SC1740S
	Q5603–Q5605, Q5609		2SC1740S
	Q5613–Q5620		2SC1740S
	Q5267, Q5269, Q5271		2SC2235
	D5251–D5283, D5293–D5297		1SS254
	D5308–D5310, D5314–D5319		1SS254
	D5329–D5338, D5340–D5347		1SS254
	D5349–D5362, D5601		1SS254
	D5603–D5605, D5608–D5620		1SS254
	D5298–D5306, D5320–D5328		MTZJ11
	D5284–D5292		S5688G

COILS AND FILTERS

Mark	No.	Description	Part No.
	L5601–L5603, L5605		ATH–059
	L5251		LAU100J
	L5253		LAU1R0J
	L5252		LAU4R7J

CAPACITORS

Mark	No.	Description	Part No.
	C5259		CCCCH271J50
	C5298, C5299		CCCCH7R0D50
	C5332, C5629–C5631		CCCSL150J50
	C5296		CCCSL151J50
	C5322, C5334		CCCSL180J50
	C5288		CCCSL220J50
	C5295		CCCSL2R0C50
	C5605		CCCSL330J50
	C5287		CCCSL560J50
	C5269, C5281, C5282, C5297, C5321		CEAT100M50
	C5336, C5619		CEAT100M50
	C5251, C5255, C5312, C5324, C5340		CEAT101M10
	C5601, C5602, C5622		CEAT101M10
	C5309, C5604		CEAT101M16
	C5610, C5612		CEAT102M16
	C5616, C5617		CEAT102M25
	C5274, C5284		CEAT1R0M50
	C5301, C5331		CEAT220M50
	C5270		CEAT221M10
	C5319		CEAT221M16
	C5607, C5608, C5623		CEAT222M10
	C5272, C5283		CEAT2R2M50

Mark	No.	Description	Part No.
	C5292		CEAT470M16
	C5613		CEAT471M16
	C5261		CEAT471M6R3
	C5285		CEAT4R7M50
	C5257, C5258, C5271, C5273		CEATR10M50
	C5286		CEATR47M50
	C5252–C5254, C5256, C5262, C5278		CKCYF103Z50
	C5293, C5294, C5310, C5311		CKCYF103Z50
	C5316–C5318, C5325, C5339, C5341		CKCYF103Z50
	C5603, C5624–C5628		CKCYF103Z50
	C5263–C5268, C5275–C5277		CQMA104J50
	C5323		CQPA103J2A
	C5300		CQPA223J2A
	C5260		CQPA271J2A

RESISTORS

Mark	No.	Description	Part No.
	R5326, R5331, R5336		RD1/2PM100J
	R5285–R5287		RD1/2PM101J
	R5656, R5657		RD1/2PM152J
	R5323, R5328, R5333		RD1/2PM821J
	R5317, R5319, R5321		RD1/2PM8R2J
	R5309		RN1/4PC1002F
	R5310		RN1/4PC1102F
	R5346, R5587		RN1/4PC1201F
	R5297		RN1/4PC1202F
	R5586		RN1/4PC1300F
	R5303		RN1/4PC1501F
	R5345, R5644		RN1/4PC1502F
	R5711		RN1/4PC1801F
	R5353		RN1/4PC2002F
	R5298		RN1/4PC2201F
	R5307		RN1/4PC2700F
	R5344, R5643		RN1/4PC2701F
	R5295, R5296, R5304, R5347		RN1/4PC3301F
	R5469, R5470		RN1/4PC3301F
	R5349, R5354		RN1/4PC3302F
	R5311		RN1/4PC4702F
	R5343		RN1/4PC5101F
	R5306, R5308		RN1/4PC5601F
	R5302, R5305		RN1/4PC7500F
	R5294, R5300		RN1/4PC8200F
	R5348		RN1/4PC9102F
	R5645, R5646		RS2MMF1R0J
	R5663, R5712		RS3LMFR22J
	VR5251, VR5252 (22 kΩ)		ACP1072
	Other Resistors		RD1/4PU □□□ J

OTHERS

Mark	No.	Description	Part No.
	CN5601, CN5603, CN5604	SOCKET 50–P	AKP1161
	CN5602, CN5605	SOCKET 44–P	AKP1186
	KN5601–KN5604	GROUND PLATE	ANK–142
	CN5607	11P PLUG	KM200IA11
	CN5609	12P PLUG	KM200IA12
	CN5255	PLUG 11–P	KM250MA11
	CN5251	PLUG 15–P	KM250MA15
	CN5252	PLUG 3–P	KM250MA3
	CN5611	PLUG 4–P	KM250MA4
	CN5610	PLUG 6–P	KM250MA6
	CN5606	8P SOCKET	KP250NA8
	5602, 5604	SCREW	PMZ30P100FZK

A SIGNAL ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC2452		M38869FFAHP
	IC2454		24LC32A (I) P
	IC7703		CM0010AF
	IC6305		CXA1315M
	IC2701		CXA2094Q
	IC7002		HY514264BJC–50A
	IC7704		KIA431F
	IC7702		LC32V4265JL–25S
	IC7003		MB40C568HPFV
	IC2451, IC2702		MC14066BF
	IC7501		ML6420CS–3
	IC7006		ML6428CS–1
	IC7301, IC7304		MM1031XM
	IC7103, IC7303, IC7305, IC7306		NJM2233BM
	IC7503		NJM2283M
	IC2703, IC2801, IC7004, IC7308, IC7701		PQ20VZ1U
	IC2453		PST9146N
	IC7101, IC7300		TA1270AF
	IC6301–IC6304		TC74HC4053AF
	IC7505		TC74HC4066AF
	IC7504		TC74HC4538AF
	IC7307		TC90A45F
	IC7102, IC7302, IC7502		TK15420M
	IC7001		UPD64081BGF–3BA
	Q2452, Q2454, Q2701, Q2706, Q2713		2SA1162
	Q2715, Q2804, Q2805, Q6301		2SA1162
	Q6303, Q6304, Q6306, Q6308, Q6310		2SA1162
	Q6313–Q6322, Q6324, Q6325, Q6361		2SA1162
	Q6363, Q7002, Q7003, Q7005, Q7006		2SA1162
	Q7009, Q7108, Q7118–Q7124, Q7311		2SA1162
	Q7316, Q7318, Q7319, Q7323–Q7325		2SA1162
	Q7528		2SA1162
	Q2453, Q2455–Q2457, Q2459–Q2464		2SC2712
	Q2702–Q2705, Q2707, Q2708, Q2711		2SC2712
	Q2714, Q2801–Q2803, Q2806		2SC2712
	Q2808–Q2810, Q6328–Q6360, Q6362		2SC2712
	Q7001, Q7004, Q7007, Q7008		2SC2712
	Q7010, Q7011, Q7013–Q7015		2SC2712
	Q7101–Q7105, Q7107, Q7111		2SC2712
	Q7113–Q7117, Q7125, Q7128		2SC2712
	Q7300, Q7301, Q7303, Q7304, Q7309		2SC2712
	Q7312–Q7315, Q7317, Q7320		2SC2712
	Q7501, Q7502, Q7505, Q7507–Q7527		2SC2712
	Q7529, Q7530		2SC2712
	Q2451, Q6302, Q6305, Q6307, Q6309		2SC4213
	Q6311, Q6312, Q6323, Q6326, Q6327		2SC4213
	Q7307, Q7308, Q7310		2SC4213
	Q2458		2SJ461
	Q7012		2SK209
	D2454, D2455, D2490		1SS184
	D2456, D2457, D2460–D2469		1SS226

Mark	No.	Description	Part No.
	D2475–D2484, D2486, D2488		1SS226
	D2703–D2707, D2801, D2802, D2805		1SS226
	D6301–D6309, D6316–D6320		1SS226
	D2451–D2453, D2458, D2459, D2485		1SS352
	D2489, D6310, D6313, D7001, D7504		1SS352
	D7300, D7301, D7501–D7503		RD10MB
	D2487		RD6.8MB
	D2709, D2804		UDZ33B

COILS AND FILTERS

Mark	No.	Description	Part No.
	L2457		ATF–163
	F7001, F7002, F7004, F7701–F7704		ATF1189
	DL7101		ATN1054
	L2451, L2452		ATX1035
	L7008, L7011, L7102, L7504		LCTA100J3225
	L7302		LCTA101J3225
	L7103, L7306		LCTA120J3225
	L7101		LCTA121J3225
	L7009, L7012		LCTA150J3225
	L6302, L7010, L7106, L7303–L7305		LCTA220J3225
	L7505		LCTA220J3225
	L2701–L2705, L2801–L2804		LCTA2R2J3225
	L7104		LCTA3R9J3225
	L7001		LCTA4R7J3225
	L7105, L7107, L7300, L7307, L7506		LCTA5R6J3225
	L7002, L7003, L7005–L7007		QTL1013
	L7705, L7706		QTL1013

CAPACITORS

Mark	No.	Description	Part No.
	C7114, C7317	(0.47 µF/16V)	ACE1130
	C7140, C7340, C7361, C7363		CCSQCH120J50
	C7051, C7062, C7136, C7138, C7554		CCSQCH121J50
	C7060		CCSQCH150J50
	C7355, C7357		CCSQCH181J50
	C7362, C7364		CCSQCH270J50
	C7139		CCSQCH331J50
	C2727, C2811, C6373, C6374		CCSQCH470J50
	C7014		CCSQCH471J50
	C7137		CCSQCH680J50
	C7365, C7370		CCSQCJ3R0C50
	C7102, C7301		CCSQSL222J50
	C7008		CCSQSL391J50
	C7057, C7063		CCSRCH100D50
	C2732, C2822, C7033, C7520, C7521		CCSRCH101J50
	C7523, C7524, C7526, C7527, C7553		CCSRCH101J50
	C7555, C7556		CCSRCH101J50
	C7002, C7003		CCSRCH180J50
	C7047, C7050, C7146, C7550		CCSRCH220J50
	C7059, C7145, C7356, C7372, C7532		CCSRCH330J50
	C7535, C7551, C7552		CCSRCH330J50
	C7058, C7064		CCSRCH560J50
	C7512		CCSRCH680J50
	C2478		CEAT222M10
	C2479		CEAT222M16
	C2702, C2703, C2725, C2729, C2737		CEV100M16
	C2740, C2741, C2747, C2802–C2804		CEV100M16
	C2815, C6325, C6348, C7010		CEV100M16
	C7125, C7126, C7329, C7330		CEV100M16
	C7344–C7347, C7504–C7506		CEV100M16

Mark	No.	Description	Part No.
	C7508, C7509, C7522, C7525, C7559		CEV100M16
	C7725–C7730, C7760		CEV100M16
	C2738, C2746, C2818, C2821		CEV100M50
	C2454, C2462, C2467, C2473, C7027		CEV101M6R3
	C7029, C7039, C7515, C7704–C7706		CEV101M6R3
	C7755		CEV101M6R3
	C7105		CEV102M6R3
	C2705, C2709, C7052, C7054, C7055		CEV1R0M50
	C7341, C7343, C7358		CEV1R0M50
	C2476, C6301–C6306, C6308–C6310		CEV220M16
	C6312–C6317, C6322–C6324		CEV220M16
	C6368–C6370, C7133–C7135		CEV220M16
	C7337–C7339		CEV220M16
	C2735, C2814, C7034, C7036, C7038		CEV221M10
	C7511		CEV221M10
	C7103, C7104, C7302, C7303		CEV2R2M50
	C2453, C2717, C6320, C6332, C6339		CEV470M16
	C6355, C6357, C6363–C6365, C7053		CEV470M16
	C7128, C7130, C7141, C7143, C7332		CEV470M16
	C7335, C7336, C7529		CEV470M16
	C2455, C7025, C7061, C7147, C7304		CEV470M6R3
	C7342, C7349, C7351, C7501, C7510		CEV470M6R3
	C7518, C7519, C7546, C7548, C7716		CEV470M6R3
	C7723, C7732, C7734		CEV470M6R3
	C2720, C2721, C2723, C2801, C2808		CEV471M10
	C2810		CEV471M10
	C2451, C2452, C2701, C2706, C2707		CEV4R7M35
	C2714–C2716, C2718, C2750, C2751		CEV4R7M35
	C6326, C6349		CEV4R7M35
	C7101, C7300		CEVR22M50
	C2708		CFHS123J16
	C7107, C7307		CFHS223J16
	C2712		CFHS473J16
	C7106, C7108–C7113, C7306		CFHSP104J16
	C7311–C7316		CFHSP104J16
	C2713		CFHSQ272J50
	C2711		CKSQYB562K50
	C2719, C2722, C2724, C2726		CKSQYF103Z50
	C2730, C2731, C2734, C2736, C2739		CKSQYF103Z50
	C2745, C2805, C2806, C2809		CKSQYF103Z50
	C2816, C2817, C2819, C7348, C7350		CKSQYF103Z50
	C7352–C7354, C7359, C7360		CKSQYF103Z50
	C7366–C7369, C7371		CKSQYF103Z50
	C7745–C7753, C7761–C7763, C7769		CKSQYF105Z16
	C7772		CKSQYF105Z16
	C7754		CKSQYF224Z25
	C2459, C2464, C2728, C2748, C2807		CKSRYB102K50
	C2812		CKSRYB102K50
	C2457, C2458, C2460, C2463, C2465		CKSRYB103K50
	C6307, C6311, C6318, C6321		CKSRYB103K50
	C6328–C6331, C6333, C6335–C6338		CKSRYB103K50
	C6340, C6342–C6347, C6351–C6353		CKSRYB103K50
	C6356, C6358–C6362, C6366, C6367		CKSRYB103K50
	C7012, C7148, C7305, C7766		CKSRYB103K50
	C7756, C7758		CKSRYB152K50
	C7765		CKSRYB683K16
	C2456, C2461, C2468–C2472, C2474		CKSRYF104Z16

Mark	No.	Description	Part No.
	C2477, C2480, C7001, C7004–C7007		CKSRYF104Z16
	C7009, C7011, C7013, C7015–C7024		CKSRYF104Z16
	C7026, C7028, C7030–C7032, C7035		CKSRYF104Z16
	C7037, C7041, C7046, C7048, C7049		CKSRYF104Z16
	C7056, C7116, C7117, C7120, C7124		CKSRYF104Z16
	C7127, C7129, C7142, C7144, C7323		CKSRYF104Z16
	C7327, C7331, C7333, C7502, C7503		CKSRYF104Z16
	C7507, C7514, C7528, C7545, C7547		CKSRYF104Z16
	C7557, C7558, C7701–C7703		CKSRYF104Z16
	C7707–C7715, C7717–C7722, C7724		CKSRYF104Z16
	C7731, C7733, C7735–C7744		CKSRYF104Z16
	C7767, C7768, C7770, C7771		CKSRYF104Z16
	C7764		CKSRYF473Z50
	C2710		CSZS3R3K20
	C2704		CSZSC100K25

RESISTORS

	R7710–R7713 (22 kΩ ×4)		ACN7073
	R2475, R2481–R2485, R2487 (100 Ω ×4)		DCN1092
	R2498, R2499, R7714–R7720 (100 Ω ×4)		DCN1092
	R2763, R2830		RD1/2LMF271J
	R2764, R2837		RS1/16S1001F
	R7730		RS1/16S1002F
	R7029, R7424, R7701		RS1/16S1101F
	R7729		RS1/16S1502F
	R7030, R7046, R7702		RS1/16S1801F
	R7047		RS1/16S2701F
	R7423		RS1/16S3301F
	R2771, R2834		RS1/16S6201F
	VR2701, VR2801 (470 Ω)		ACP1088
	Other Resistors		RS1/16S □□□ J

OTHERS

	2704, 2705	PULG CORD	ADE1171
	J2703	10P HOUSING WIRE	ADX2496
	J2451	3P HOUSING WIRE	ADX2499
	J2701	3P HOUSING WIRE	ADX2567
	CN2454	PLUG 50–P	AKM1126
	CN7501	PLUG 44–P	AKM1155
	K7503–K7506, K7509–K7514, K7706		AKX9002
	K7709–K7712		AKX9002
	X2451	CERAMIC RESONATOR	ASS1015
	X7102, X7301	CERAMIC RESONATOR	ASS1019
	X7101, X7300	(3.58 MHz)	ASS1138
	X7001 (20 MHz)		ASS1143
	CN2457	L–PLUG (8P)	KM250MA8L
	CN2451	L–PLUG (8P)	KM250MA8LR
	CN2458	PH CONNECTER (SMT)	S12B–PH–SM3
	CN2455	CONNECTOR	S3B–PH–SM3
	CN2701	CONNECTOR	S5B–PH–SM3
	CN2453	CONNECTOR	S8B–PH–SM3

RF SWITCH

RF SWITCH has no service part.

TV FRONT END SYSTEM UNIT

TV FRONT END SYSTEM UNIT has no service part.

H SUB VIDEO SERVICE ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC4001		AD8057ART
	IC3001		AN5344FBP
	IC4301		AN5395FBP
	IC4304		CXA1315M
	IC3201		CXA3106Q
	IC3203		CXD2303AQ
	IC3601, IC3604		EM636327Q–8
	IC4802		HG62G010R29FB
	IC4052		M52036SP
	IC3602		MB40958PFQ
	IC3003		NJM319M
	IC2204		PD0264AM
	IC3801		PD3420A8
	IC2201		PD5563
	IC3401		PE5066A
	IC3501		PE5067A
	IC2203		PST9146N
	IC3206		TA78M05F
	IC4806		TA8667F
	IC2205		TC74HC157AF
	IC4803		TC74HC4040AF
	IC4051		TC74HC4053AF
	IC4053, IC4055		TC74HC4066AF
	IC4054, IC4056		TC74HC4538AF
	IC4804		TC74HCT74AF
	IC3204		TC74LCX541FT
	IC3502, IC3503		TC7SET04FU
	IC3209, IC3802		TC7SET08FU
	IC3002		TK15420M
	Q2202, Q2204, Q2205, Q2207, Q2208		2SA1162
	Q3002, Q3003, Q3016, Q3018		2SA1162
	Q3604–Q3606, Q4003, Q4005		2SA1162
	Q4057, Q4058, Q4062–Q4064		2SA1162
	Q4071, Q4072, Q4078, Q4081, Q4087		2SA1162
	Q4089–Q4091, Q4096, Q4301, Q4302		2SA1162
	Q4306, Q4307, Q4319, Q4328, Q4330		2SA1162
	Q4001, Q4007		2SA1669
	Q2201, Q2203, Q2206, Q2209, Q2210		2SC2712
	Q3001, Q3008–Q3013, Q3015, Q3017		2SC2712
	Q3201–Q3213, Q3601–Q3603, Q4002		2SC2712
	Q4004, Q4006, Q4008, Q4051–Q4056		2SC2712
	Q4059–Q4061, Q4065–Q4070		2SC2712
	Q4075–Q4077, Q4079, Q4080		2SC2712
	Q4083–Q4086, Q4088, Q4092–Q4095		2SC2712
	Q4097, Q4098, Q4102, Q4303–Q4305		2SC2712
	Q4308–Q4311, Q4321–Q4323		2SC2712
	Q4325–Q4327, Q4331, Q4332		2SC2712
	Q4807–Q4817		2SC2712
	Q4082		2SK209
	D3001		1SS184

Mark	No. Description	Part No.
	D2203, D2206, D2207, D2210–D2212	1SS226
	D2215–D2234, D4056, D4057	1SS226
	D4059, D4060	1SS226
	D3201, D4052–D4054, D4058	1SS352
	D4802–D4805	1SS352
	D2204, D2205	RD6.8MB

COILS AND FILTERS

Mark	No. Description	Part No.
	L2203, L4802	ATC1037
	F2201, F3202, F3203, F3401, F3801	ATF1189
	F4302, F4801–F4804	ATF1189
	DL3001	ATN1040
	DL4303	ATN1055
	L3601, L3603, L3605	LCTA1R2J3225
	L4310, L4312	LCTA1R5J3225
	L3602, L3604, L3606	LCTA2R2J3225
	L3202, L3205, L3207	LCTA4R7J3225
	L2201, L3001, L3201, L3203, L3204	LCTA5R6J3225
	L3206, L4302, L4311	LCTA5R6J3225
	L4301	LCTA820J3225

CAPACITORS

Mark	No. Description	Part No.
	C3205, C3207 (0.47 µF/16V)	ACE1130
	C3019, C3265, C3654	CCSQCH100D50
	C3204, C3264, C3645–C3647, C4082	CCSQCH101J50
	C4365–C4367	CCSQCH101J50
	C2211	CCSQCH120J50
	C2207, C2208	CCSQCH150J50
	C3655, C3656	CCSQCH180J50
	C2205, C2241, C4823, C4828	CCSQCH221J50
	C4369	CCSQCH270J50
	C3243, C3247, C3266, C3269	CCSQCH330J50
	C3245, C3267, C3270	CCSQCH331J50
	C2210	CCSQCH390J50
	C3246, C3268, C3271, C4310	CCSQCH470J50
	C3620, C3648, C3649, C4302, C4347	CCSQCH560J50
	C2206, C4062, C4064	CCSQCH561J50
	C3202	CCSQSL222J50
	C3416, C3520, C3616, C3618, C3619	CCSRCH220J50
	C3817	CCSRCH220J50
	C3814, C3815	CCSRCH7R0D50
	C3026, C3031, C3219, C3239, C4067	CEV100M16
	C4101, C4315	CEV100M16
	C4348–C4350	CEV101M16
	C2222, C2226, C2237, C2239, C3020	CEV101M6R3
	C3030, C3401, C3501, C3506	CEV101M6R3
	C3801, C3802, C4804, C4817	CEV101M6R3
	C2234, C3014, C3640, C4099, C4377	CEV1R0M50
	C4052, C4053	CEV220M16
	C3009, C3017	CEV2R2M50
	C3005, C3006, C3023, C3028	CEV470M10
	C4004, C4005, C4051, C4054	CEV470M10
	C4056, C4057, C4059, C4068, C4078	CEV470M10
	C4080, C4345	CEV470M10
	C4002, C4003, C4065, C4092, C4093	CEV470M16
	C4802, C4832	CEV470M16
	C3208, C3209, C3220, C3224, C3233	CEV470M6R3
	C3241, C3244, C3250–C3252, C3254	CEV470M6R3
	C3256, C3601, C3602, C3617	CEV470M6R3
	C3623, C3624, C3643, C3644, C4075	CEV470M6R3
	C4089	CEV470M6R3
	C4081, C4094–C4097	CEV4R7M35
	C3024	CEVNP2R2M35
	C3007, C3008	CEVNPR33M50
	C4063	CEVR10M50
	C3001, C3002	CEVR33M50
	C2238, C3015	CEVR47M50
	C3012, C4303, C4311, C4319, C4359	CFHSQ103J16
	C4104	CFHSQ331J50
	C4103	CFHSQ332J16
	C4087, C4102	CFHSQ821J50
	C4055, C4355–C4358, C4829	CKSQYB224K16
	C4060, C4086	CKSQYB472K50
	C4098	CKSQYB561K50
	C4830	CKSQYB822K50
	C4084	CKSQYF104Z50
	C3010, C3011, C4831, C4835	CKSQYF105Z16
	C2224, C2228, C3022, C4323, C4324	CKSRYB102K50
	C4822	CKSRYB102K50
	C2223, C3013, C3016, C3210–C3215	CKSRYF103Z50
	C3641, C4304–C4309, C4312, C4314	CKSRYF103Z50
	C4316, C4320, C4322, C4343, C4370	CKSRYF103Z50
	C4827	CKSRYF103Z50
	C2209, C2220, C2221, C2225, C2227	CKSRYF104Z16
	C2236, C3003, C3004, C3018, C3025	CKSRYF104Z16
	C3027, C3029, C3201, C3216–C3218	CKSRYF104Z16
	C3221–C3223, C3225–C3232, C3234	CKSRYF104Z16
	C3238, C3240, C3242, C3248, C3249	CKSRYF104Z16
	C3255, C3257, C3263, C3276	CKSRYF104Z16
	C3403–C3415, C3502–C3505	CKSRYF104Z16
	C3507–C3519, C3603–C3615	CKSRYF104Z16
	C3621, C3622, C3625–C3639, C3642	CKSRYF104Z16
	C3803–C3805, C3816, C3818, C4001	CKSRYF104Z16
	C4058, C4061, C4066, C4069, C4074	CKSRYF104Z16
	C4077, C4079, C4083, C4088, C4091	CKSRYF104Z16
	C4317, C4321, C4340, C4344, C4346	CKSRYF104Z16
	C4801, C4803, C4810, C4816	CKSRYF104Z16
	C4818, C4819, C4821, C4833, C4834	CKSRYF104Z16
	C4836, C4837	CKSRYF104Z16
	C3206, C3261	CKSRYF223Z50

RESISTORS

Mark	No. Description	Part No.
	R3521, R3522, R3801, R3808	DCN1090
	R3819–R3821, R3826, R3831	DCN1090
	R2269, R2275	DCN1092
	R3809, R3810	DCN1100
	R3291, R4022, R4193	RS1/16S1001F
	R4008, R4012	RS1/16S1202F
	R3207, R3290	RS1/16S1601F
	R4004, R4010, R4219	RS1/16S2001F
	R4002, R4021	RS1/16S2002F
	R4009	RS1/16S3001F
	R3206	RS1/16S3301F
	R4871	RS1/16S3302F

Mark	No.	Description	Part No.
	R4175, R4870		RS1/16S6802F
	R3261		RS3LMF330J
	VR3003 (1 kΩ)		ACP1089
	VR4052 (2.2 kΩ)		ACP1090
	VR3004 (4.7 kΩ)		ACP1091
	Other Resistors		RS1/16S□□□J

OTHERS

	CN3002	PLUG 50–P	AKM1126
	CN3001	PLUG 44–P	AKM1155
	K3001–K3003, K3201, K3202		AKX9002
	K3501–K3514, K3801–K3826		AKX9002
	K4301–K4304		AKX9002
	X2202	CERAMIC RESONATOR	ASS1015
	X3801 (20.0 MHz)		ASS1147
	CN2202	PLUG 6–P	KM250MA6L

B AV I/O ASSY (AWV1802)

SEMICONDUCTORS

	IC6001		CXA2069Q
	IC6201, IC6202		MC14066BF
	Q6004, Q6012, Q6014, Q6015, Q6019		2SA1162
	Q6022, Q6024, Q6025, Q6034		2SA1162
	Q6036–Q6038, Q6201, Q6206, Q6212		2SA1162
	Q6214, Q6216–Q6218		2SA1162
	Q6001–Q6003, Q6005–Q6011, Q6013		2SC2712
	Q6016–Q6018, Q6020, Q6021, Q6023		2SC2712
	Q6027–Q6033, Q6035, Q6039–Q6048		2SC2712
	Q6202–Q6205, Q6207–Q6211, Q6213		2SC2712
	Q6215		2SC2712
	D6040, D6041, D6207		1SS184
	D6001–D6022, D6024, D6027–D6029		1SS226
	D6032, D6034, D6036, D6208–D6212		1SS226
	D6023, D6030, D6031, D6037–D6039		1SS352
	D6201–D6203, D6213		1SS352
	D6204		RD6.8MB
	D6214		UDZS6.2B

CAPACITORS

	C6006, C6049, C6052, C6068, C6081		CEV100M16
	C6086		CEV100M16
	C6047		CEV101M6R3
	C6073, C6074		CEV102M6R3
	C6013, C6014, C6026, C6027		CEV1R0M50
	C6031, C6032, C6036, C6037		CEV1R0M50
	C6041–C6043, C6065, C6066, C6078		CEV1R0M50
	C6209		CEV1R0M50
	C6015–C6017, C6024, C6028, C6029		CEV220M16
	C6033, C6034, C6051, C6064, C6070		CEV220M16
	C6072, C6083, C6088		CEV220M16
	C6001, C6004, C6018, C6020, C6045		CEV470M16
	C6059–C6061, C6085, C6208, C6210		CEV470M16
	C6214, C6216		CEV470M16
	C6204		CEV470M6R3

Mark	No.	Description	Part No.
	C6007, C6050, C6053, C6069, C6082		CEV4R7M35
	C6087		CEV4R7M35
	C6046		CEVNP470M6R3
	C6067, C6077		CEVR47M50
	C6002, C6003, C6009–C6012		CKSQYF105Z16
	C6090, C6091, C6212, C6213		CKSQYF105Z16
	C6202		CKSQYF472Z50
	C6075, C6076		CKSRYB332K50
	C6005, C6008, C6021–C6023		CKSRYF103Z50
	C6038–C6040, C6044, C6048		CKSRYF103Z50
	C6054–C6058, C6062, C6063, C6071		CKSRYF103Z50
	C6084, C6089, C6201, C6203		CKSRYF103Z50
	C6205–C6207, C6215		CKSRYF103Z50
	C6019, C6025, C6030, C6035		CKSRYF104Z16

RESISTORS

	R6183		RD1/2LMF1R0J
	R6182		RD1/4LMF3R9J
	R6279, R6296		RS1/16S0R0J
	R6089, R6091, R6106, R6123, R6126		RS1/16S101J
	R6136, R6144, R6147, R6207, R6213		RS1/16S101J
	R6252–R6267, R6269, R6271–R6273		RS1/16S101J
	R6040, R6118, R6130, R6143, R6154		RS1/16S102J
	R6163, R6174, R6201, R6205, R6277		RS1/16S102J
	R6005, R6044, R6105, R6116, R6120		RS1/16S103J
	R6152, R6156, R6161, R6165, R6172		RS1/16S103J
	R6176, R6202, R6209, R6231, R6268		RS1/16S103J
	R6270		RS1/16S103J
	R6004, R6006, R6036, R6043, R6045		RS1/16S104J
	R6114, R6127, R6150, R6159, R6170		RS1/16S104J
	R6221–R6223		RS1/16S104J
	R6054, R6125		RS1/16S152J
	R6087, R6088, R6104, R6276		RS1/16S153J
	R6137, R6139, R6249		RS1/16S183J
	R6011, R6013, R6020–R6026		RS1/16S221J
	R6029–R6033, R6037, R6052, R6053		RS1/16S221J
	R6067, R6074, R6085, R6086, R6094		RS1/16S221J
	R6096, R6115, R6124, R6138		RS1/16S221J
	R6140–R6142, R6145, R6151, R6160		RS1/16S221J
	R6171, R6232, R6241, R6242		RS1/16S221J
	R6009, R6010, R6041, R6050, R6051		RS1/16S222J
	R6075–R6080, R6112, R6113, R6131		RS1/16S222J
	R6146, R6234, R6236		RS1/16S222J
	R6092, R6093, R6098–R6101		RS1/16S223J
	R6121, R6122, R6132–R6135		RS1/16S223J
	R6157, R6158, R6166, R6167		RS1/16S223J
	R6177, R6178, R6204, R6206		RS1/16S223J
	R6210–R6212, R6224–R6227		RS1/16S223J
	R6243–R6246, R6248, R6250, R6251		RS1/16S223J
	R6203		RS1/16S224J
	R6059, R6068, R6095, R6097, R6208		RS1/16S332J
	R6237, R6240		RS1/16S332J
	R6119, R6155, R6164, R6175		RS1/16S472J
	R6184, R6185, R6274		RS1/16S472J
	R6228, R6230, R6247		RS1/16S473J
	R6001, R6002, R6062, R6063		RS1/16S474J

Mark	No.	Description	Part No.
	R6069, R6070, R6179, R6180		RS1/16S474J
	R6034, R6035, R6102, R6103		RS1/16S560J
	R6039, R6117, R6129, R6153, R6162		RS1/16S562J
	R6173		RS1/16S562J
	R6229		RS1/16S563J
	R6012, R6014–R6017, R6019		RS1/16S622J
	R6027, R6028, R6081–R6084		RS1/16S622J
	R6110, R6111		RS1/16S622J
	R6038, R6128		RS1/16S682J
	R6055, R6057, R6189, R6191		RS1/16S683J
	R6018, R6060, R6061, R6064–R6066		RS1/16S750J
	R6071–R6073, R6181, R6186–R6188		RS1/16S750J
	R6215–R6220		RS1/16S750J
	R6048, R6049, R6148, R6149, R6194		RS1/16S821J
	R6233, R6235		RS1/16S821J
	R6056, R6058, R6190, R6192		RS1/16S823J
	R6193		RS1/16S911J
	Other Resistors		RS1/10S☐☐☐J

OTHERS

Mark	No.	Description	Part No.
	CN6001	PINJACK (6P) WITH SIN	AKB1271
	CN6002	PINJACK (6P) WITH SIN	AKB1272
	CN6003	PINJACK (6P)	AKB1273
	CN6203	PINJACK (6P)	AKB1274
	CN6205	PLUG 50–P	AKM1126
	JA6201, JA6206	JACK	AKN1071
	CN6006	L–PLUG (10P)	KM250MA10L
	CN6005	L–PLUG (11P)	KM250MA11L
	CN6007	PLUG 3–P	KM250MA3L
	CN6202	PLUG 3–P	KM250MA3LB
	CN6204	PLUG 3–P	KM250MA3LR